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ABSTRACT

This document offers various perspectives on school/college collaborations. The first section, "Schools and Colleges as an Area for Collaboration," is a broad review of how close working relationships between colleges and schools can improve education for all students, as well as help institutions improve themselves. The second section, "Getting To Know Each Other," sets some parameters for such collaborations, including the need for all partners to support the collaboration, a shared vision combined with self-interest, correct timing, agreement on policies, and an understanding of each others' cultures and styles. The third section, "Working Together," focuses on teaching, including sensitivity to the issue of teacher time, team building and networking, the need for stable leadership, and teacher needs. The fourth section, "Keeping the Collaboration Going," deals with recognizing and rewarding faculty participation, sustaining innovation, evaluation, and extending the collaboration to other projects. A brief collaboration check-off sheet follows. An afterword, "A Foundation's Perspective on Learning to Collaborate and Collaborating to Learn" by A. Richardson Love, Jr., offers a brief review of the Knight Foundation Excellence in Education initiative. A final section offers thumbnail descriptions of 26 excellence in education projects at colleges and universities throughout the United States. (Contains 11 references.) (CH)

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Collaborating to Learn

More Lessons from School-College Partnerships in the Excellence in Education Program

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K·F Knight Foundation

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November 1999

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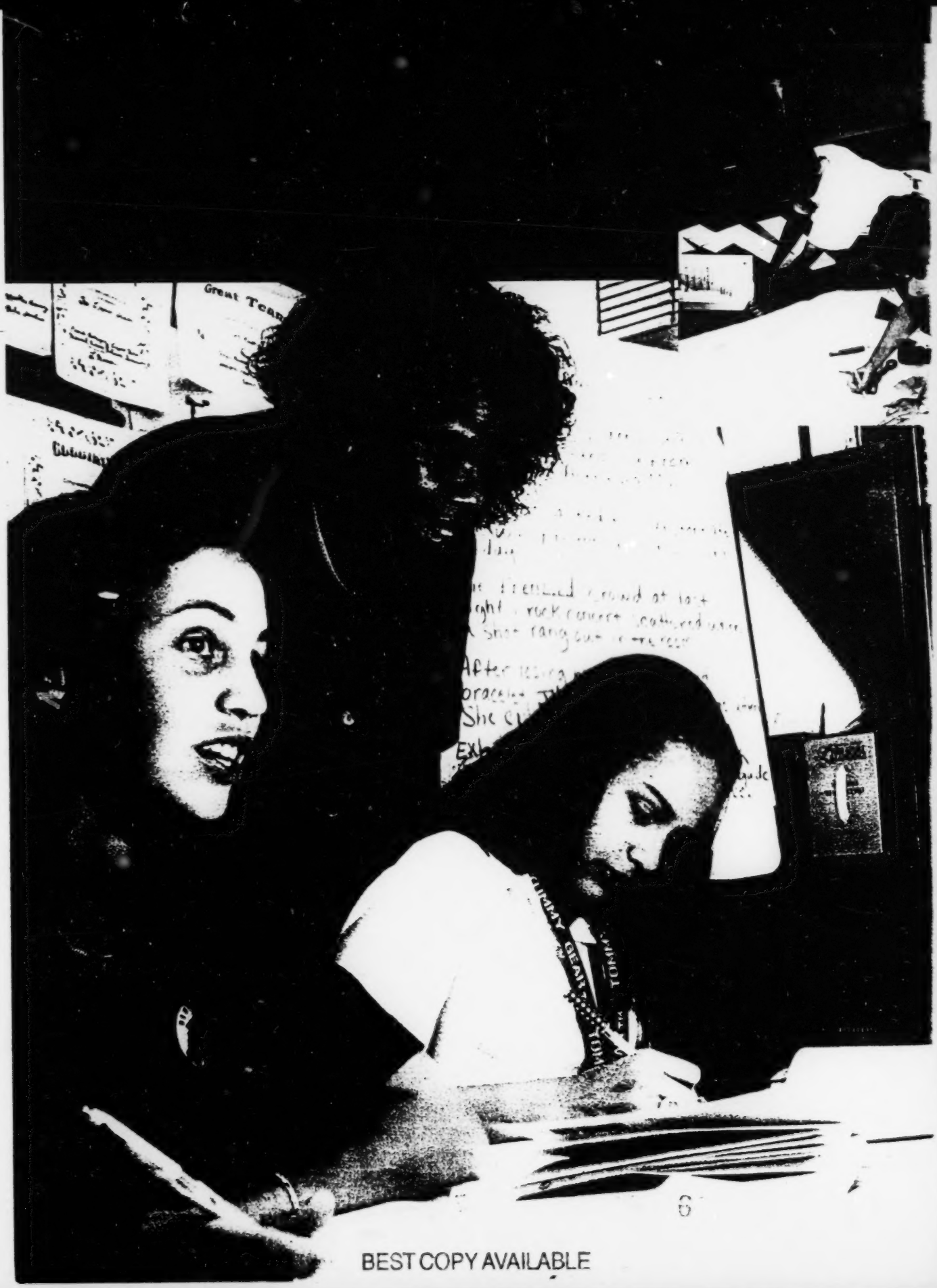

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Schools and Colleges as an Arena for Collaboration

All colleges and universities have the responsibility and the resources to work with public schools to improve education for all students, along with the opportunity to improve themselves in the process.

The John S. and James L. Knight Foundation initiated the Excellence in Education program in 1992. Believing that close working relationships between colleges and schools are among the most promising and powerful vehicles to improving learning opportunities for students at all levels of schooling, Knight Foundation awarded nearly $7.5 million in three annual competitions to support 26 school and college collaborations.

Collaborations were built between schools and colleges large and small, and in urban and rural communities across the nation. Their goals varied. Some collaborations worked toward fundamental education reform by responding to state and national standards. Others directed their efforts toward improving instruction in reading, writing, mathematics or science instruction; integrating education, health and social services; establishing mentor programs; designing interdisciplinary curricula; or encouraging members of minority groups to become certified teachers. Several collaborations aimed at increasing teachers' leadership in education reform.

In the rush to plunge right into the program concerns that are the reason for collaboration, it is easy to neglect essential issues in the collaborative process itself. Consequently, in 1996, after an external evaluation of the Excellence in Education program by Policy Studies Associates, Knight Foundation published *Learning to Collaborate*, which describes the lessons grantees had learned as they traveled the rocky, sometimes even treacherous, road to effective collaborations between schools and colleges. Not all grantees succeeded in establishing strong bonds, but many did. Consequently, the Foundation decided that instead of making new grants for new projects, it would provide additional support to the most robust existing projects to strengthen their partnerships even more. Since 1996, 18 collaborations have received transition grants, totaling more than $2 million, for up to two years of additional support. These transition grants helped the projects continue to a point where they could show impact on student achievement, demonstrate the influence on the higher education partners and institutionalize the best of their work. ⇨

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This unusually rich mix of schools, colleges and universities used their transition funds in different ways. Some collaborations deepened the relationships they had established under the original grants. Others broadened their projects beyond the original partner schools and funding sources by attracting additional partners. Still others did both. Virtually all of the grantees continued to make progress in implementing their projects during this time. In the case of the Excellence in Education project at the University of North Dakota at Grand Forks, a collaboration whose range of experiences receives frequent mention in this report, partners assumed a particularly important and poignant role in helping revive their community after the rampaging flood of 1997.

To more fully understand what it takes to build effective collaborations between schools and colleges, it is useful to explore as many of these collaborations as possible. This publication, *Collaborating to Learn*, takes a further look at the lessons Excellence in Education grantees learned about collaboration now that many of their projects have had time to mature. By revisiting the projects introduced in *Learning to Collaborate*, it relates some new lessons about sustaining collaborations and looks at how some previous lessons played out again at different sites. From time to time, *Collaborating to Learn* also highlights perspectives from others' research on school-college collaborations.

Also since the publication of *Learning to Collaborate*, Excellence in Education partners have begun to reap a mosaic of benefits from their collaborations. *Collaborating to Learn* provides an opportunity to showcase these achievements. The following listing is only a sampling of benefits experienced by students, teachers, schools, teacher education students, college and university faculty, and colleges and universities. A complete portfolio of projects begins on page 44.

Students:

- Gained enrichment opportunities that were otherwise unavailable
- Obtained access to health care and social services
- Acquired role models and mentors
- Made smoother transitions from one level of schooling to the next
- Took more rigorous courses and became active, problem-solving learners, with many making significant learning gains.

Teachers:

- Developed skills in curriculum development and integration
- Became familiar with the latest research findings in content and pedagogy, and learned to translate their new knowledge into new curricula and instructional methods
- Learned to work better with special populations of students such as Native Americans or residents of impoverished communities
- Became proficient in alternative assessment techniques
- Assumed leadership in their schools, and in some cases, team-taught with faculty at colleges and universities.

Schools:

- Adopted new instructional programs and technologies
- Increased community engagement
- Acquired new resources
- Learned to use data-based management
- Shared decision making to improve instruction
- Strengthened their professional development programs
- Recruited high-caliber teachers. ➾

Teacher education students:

- Experienced working in classrooms in which teachers provide high-quality instruction
- Developed bonds with skilled, veteran teachers
- Gained a finer understanding of their coursework as a result of their experiences in the field.

College and university faculty:

- Lectured less and engaged students in richer, more varied learning experiences
- Learned classroom-tested techniques for instruction and assessment
- Gained new insight into the conditions under which teachers work, permitting them to plan teacher preparation courses accordingly
- Added to the research on productive schools
- Established collegial relationships with teachers from public schools
- Identified exceptional public schoolteachers with whom to place student teachers.

Colleges and universities:

- Transformed teacher education programs
- Redesigned teacher education courses
- Increased collaboration among academic departments
- Recruited larger numbers of minority students with solid academic preparation for higher education
- Became more active in their communities.

Close collaboration between schools and colleges is a recent development. Traditionally, these institutions have worked apart from each other. Public schools tend to the practical, day-to-day instruction of younger students and the improvement of practice in order to raise student achievement. Meanwhile, universities and colleges of education prepare their students for careers in education and investigate the problems and theory that undergird the process of education and its subject matter content. Given the cries of crisis and calls for urgent change in the nation's schools, however, it is logical to couple the diverse but complementary roles society has assigned to schools and universities. Blending subject matter, pedagogy and classroom experience just makes sense.

Knight Foundation is not alone in supporting creative initiatives that bridge schools and higher education institutions. Awareness of the power of school and college collaborations has increased in recent years, as evidenced by the growing number of dynamic collaborations taking shape around the country. The Excellence in Education program complements these other school and college collaborations by focusing its energies and resources directly on improvements in the classroom. Indeed, many of the program's collaborative activities actually take place in classrooms, with school and college faculties side-by-side creating new learning opportunities for children. Here we can highlight only a few of the many other excellent school and college partnerships and their advocates:

- Community Compacts for Student Success, supported by The Pew Charitable Trusts, joins leaders in public schools, higher education institutions and civic organizations in mounting strategies for helping poor and minority students raise their academic achievement so that they can enter and succeed in college.

- Stemming from its administrative role with the Community Compacts, the Education Trust works with local K-16 councils in 30 communities nationwide. The councils, made up of educators from kindergarten through university levels, plan and implement strategies for poor and minority students to fulfill today's tougher educational requirements.

- The Yale-New Haven Teachers Institute, a collaborative project of Yale University and New Haven (Conn.) Public Schools, brings together school and university faculty to develop curricula. The institute serves as a forum where teachers meet colleagues from other schools and other disciplines at seminars and while conducting research for their curriculum units. ⇒

- The National Network for Educational Renewal (NNER) aims to improve teacher education by providing effective schools in which teachers can train. NNER consists of 34 colleges and universities, more than 100 school districts and nearly 500 schools in partnerships. Grounded in the work of John Goodlad, NNER activities are guided by 19 postulates necessary for the simultaneous renewal of schools and the education of educators.

- The Rhode Island Children's Crusade for Higher Education (RICCHE), a partnership of schools and higher education institutions, also involves local government agencies and federal programs such as AmeriCorps, juvenile crime prevention programs of the Department of Justice and the U.S. Department of Education's National Early Intervention Scholarship partnership. Students from grades 3-12 take part in within-school, after-school and weekend programs that bolster their academic and personal skills. The children, called Crusaders, prepare for later academic success by learning about education and career options, including the high school courses and achievement levels they will need for college and financial aid.

- The Holmes Partnership fosters collaboration between K-12 schools and universities to boost educator preparation and development, education equity, students' academic learning and applied inquiry.

- The National Education Association's Teacher Education Initiative emphasizes nine principles for teacher education embraced by exemplary programs and includes a network of model professional development schools.

- The National Council for the Accreditation of Teacher Education Professional Development Schools Standards Project, supported by the DeWitt Wallace-Reader's Digest Fund, is piloting national draft standards for professional development schools that were developed collaboratively by schools and institutions of higher education.

- The American Council on Education announced in mid-1999 the formation of The National Council for Community and Educational Partnerships. The council is "a new national organization that will work with colleges, schools, government agencies, foundations, businesses and community-based organizations to help low-income students attend college."

- The National Center for Urban Partnerships is a nonprofit technical assistance agency with offices in New York City and Washington, D.C., funded initially by the Ford Foundation. It supports citywide partnerships between K-16 educators and representatives from community, corporate and political sectors.

Operating in concert with others is part of human nature, and so it is often assumed that collaborations such as these happen naturally. One of the important findings to emerge from the Excellence in Education program is that collaboration needs to be learned. Most school and college faculty do not come from a tradition that includes training in the skills that foster open and effective collaboration.

Looking to the 21st century, the world will become an even more interdependent place. Greater demands on resources will make it incumbent on individuals in all walks of life to learn to work together in a variety of endeavors. Interagency collaboration is already part of the professional lexicon in the health and social arenas. Education needs that same commitment.

Training for collaboration is one way to hasten this process. The pressure is on universities and colleges of education to adjust their teacher preparation programs to instill the skills, knowledge and attitudes needed in collaborative work. What constitutes these skills, knowledge and attitudes? Among others, they revolve around building consensus, adopting shared values, developing political support, understanding institutional culture, communicating, resolving conflicts and evaluating collaborative work. Future teachers must also have opportunities to test and polish their collaborative competence in schools.

Further, if the teacher preparation programs are in themselves collaborative, they will enhance the skills, attitudes and knowledge of school and college faculty already in the work force.

Knight Foundation understands that the road to reformulating the nature of teacher education to include collaboration is strewn with obstacles. But it also believes that collaboration is the way to enter the 21st century. It believed this when it initiated the Excellence in Education program and it believes it still. ✓

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Getting to Know Each Other

Collaboration puts an end to arguments about "Who is the expert?" There is no quicker recipe for failure than college faculty going into schools to "fix" teacher practice. Similarly, teachers who view college faculty as descending from ivory towers and out of touch with the real world miss out on a key opportunity to keep their content knowledge current

All partners must support collaboration.

Education has many stakeholders. Teachers, administrators, parents, college and university faculty, representatives from businesses and community agencies and, most of all, students, all have an interest in seeing education reform take hold and succeed. Often the first challenge confronting a new collaboration is to line up these stakeholder groups so that they stand behind the effort. Any one of them may resist new organizational arrangements or ways of doing things. They are certain to view with alarm any collaboration imposed on them either by an external source or from on high. It's better to start by taking enough time to find out who has a vested interest in a project's outcome, regardless of support or opposition, and give them a chance to get their voices heard. By then involving as many of those parties as possible in planning efforts, the project not only garners long-term support and stability but also defuses resistance to change that could surface later on. Science faculties at Juniata College and in surrounding school districts spent more than a year and a half planning their collaboration. By the time they were ready to implement it, everyone was on board.

Excellence in Education projects pursued a number of strategies to maximize backing among stakeholders. The Commonwealth Partnership made sure that school and college faculties had plenty of opportunities to state their needs and form the collaboration's goals together. Florida State University asked for at least 90 percent buy-in of all school staff before its project started. Florida A&M University and Indiana University Northwest set up contracts in their projects for participants to sign. Columbia College and its partners mobilized support by having the project's top leadership, including the college president, school superintendent and school board members appear together at public functions to emphasize their commitment to the joint effort. Northern State University encouraged its partner schools to send the curriculum coordinator, principal or superintendent to workshops, believing that administrators who get involved early tend to display greater buy-in. Even when their value is largely symbolic, endorsements from the top send a strong message about the importance of a collaborative project and make it possible to manage the collaboration at the lower levels. ▪

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Conversely, projects that failed to enlist the support of key stakeholders had a rougher time getting under way. Two Excellence in Education projects eventually broke down largely because teacher unions opposed them.

Equally important is ensuring that all participants understand how the collaboration will advance their goals. Most educators want to know what they are getting into in advance. The more stakeholders understand how they fit into a collaboration and how the means connect to the ends, the more they will be willing to climb aboard. If the goal of a project is improved student learning, but its activities focus on site-based management and decision making, everyone needs to understand the role of site-based management in achieving the overall goal. If there is pertinent research available or stories to relay from other schools and colleges that have had similar experiences, stakeholders want them.

Collaborations teem with political issues as well. A new collaboration can trigger conflict if nonparticipants fear that the support they've been getting from the college will now be redirected to the collaboration. This, in fact, happened in the early years of the project in Grand Forks, where a new professional development school drew teacher education students away from other schools. Over time, however, all teachers began to see the broader benefits of having a local site for testing innovative ideas and training entry-level teachers. Many schools adopted practices that had been refined at the professional development school, and many hired teachers who had interned there. In short, critics became advocates.

A shared vision and a healthy dose of self-interest drive successful collaborations.

Successful collaborations are motivated by a clear and compelling need on the part of everyone involved. Some call this "enlightened self-interest." The schools and colleges in the Excellence in Education program catered to their own interests in advancing a joint vision. They saw a situation or problem, acknowledged that it was to their benefit to collaborate and committed themselves to reaching consensus on how to solve it.

The other rule pertaining to a shared vision is that partners must have a common definition of success. Schools and colleges must define success collectively, establish benchmarks and set realistic timelines for achieving them. Definitions of success in Excellence in Education projects ranged from improved student scores on standardized measures of achievement to the provision of a wider range of academically challenging experiences for K-12 students. In strong collaborations, everyone agreed upon and had similar expectations of the outcomes, along with a clear understanding of what will be accomplished and when. Even in collaborations that were about invention or that focused on meeting emerging needs, participants had a keen sense of their ultimate goal.

Having all these principles in place, however, is not always enough to protect a project's vision from conflicting initiatives emanating from the university, district or state. Project staff at Johns Hopkins University saw a local career education initiative place disadvantaged elementary school students in a low-expectations environment where, for example, fourth-graders learned food service and hairdressing skills. The Hopkins staff perceived these activities as undermining their own long-term reform goal of instilling higher academic expectations in students. That particular career education initiative, however, was backed by substantial external funding that their partner district found hard to resist. The collaboration continued, but with a mixed message for students.

The timing must be right.

Timing plays a big role in determining if a school or college is receptive to collaboration. Two universities were in the midst of revising their teacher education programs when they received Excellence in Education grants. As Columbus State University switched from a quarter system to a semester system, instructors had to add material to each course they taught, and in some instances, consolidate courses. Rethinking the curriculum created the perfect opportunity to replace old, worn-out instruction with fresh ideas and content gleaned from collaborating with content specialists in their own institutions and with classroom teachers in schools.

Perspective

Self-Interest Infuses Focus and Energy

Determining at the start what each partner wishes to obtain from its involvement in the collaboration is a key factor in partners getting to know each other and building trust. It's not essential that both partners get the same thing out of a collaboration. In fact, the different nature of schools and universities almost guarantees different outcomes for each. But their aims do have to be in harmony. Even within the same project, outcomes may differ when, for example, some schools use project resources to enrich existing courses while others use them to offer new courses.

The vision that guided Project Achieve at Gallaudet University, for example, was giving deaf and hard-of-hearing children strong role models with whom they could interact in the classroom. The program aimed to increase the number of certified teachers of deaf and hard-of-hearing children who themselves are deaf or hard of hearing or who are members of minority racial or ethnic groups. Part of the reason that schools were so willing to collaborate with the university was that their participation would broaden their pool of qualified teacher candidates from underrepresented groups. Meanwhile, the university was able to attract a greater diversity of students into its teacher education program.

The line between self-interest and enlightened self-interest occasionally blurs. College faculty, in particular, can fragment a collaboration if they use it to pursue inquiries that are only peripherally related to a project's goals. It is far better that the vision and goals of a collaboration be broad enough to draw together many members of the partnering organizations into a variety of activities. Partners in Grand Forks illustrated this when they prevented their effort from becoming "just another project" by adding critical health and community services to its education component.

While it's clearly important to agree on vision, vision alone won't get nascent collaborations off the ground. Two other maxims regarding a shared vision emerged from Excellence in Education projects. The first is that the partners in a collaboration must perceive the principles underlying the vision in the same way and be able to turn them into compatible goals and strategies. Different perceptions, say, of the activities that are appropriate at various stages of a project could bring implementation to a crawl later on. Florida State University's project staff learned this the hard way when, during the implementation of a middle schools program to integrate instruction in math, science, reading and writing, teachers balked because their notion of appropriate activities differed from that of project staff. Looking back, project staff maintain that their program would have traveled a smoother road had they been more specific about what an instructional unit should look like and then selected teachers who were more receptive to change.

Goodlad, 1987

The timing was also right for change in Pennsylvania, which was adopting state standards in science education. Banding together in Juniata College's collaboration gave school and college faculty a head start in weighing the implications of the new standards for their institutions and designing curricula and professional development programs aimed at helping students meet the new standards.

Partners must agree on policies that guide collaboration and clarify roles and responsibilities.

The ways in which partners relate to each other can either facilitate a collaboration or destroy it. Relationships evolve over time, but planners should nurture them in the right manner from the start. Most projects found that, in addition to considering each party's needs, they also had to agree on each other's rights. Establishing clear policies and procedures about leadership roles, decision making and releasing information made collaborating a more positive experience for everyone.

Nearly all of the partners had to change policies and procedures to accommodate new ways of working with others. This was true at both personal and institutional levels. At Northern State University, different school and university procedures for distributing materials, identifying and selecting participants, locating consultants and planning and presenting activities impeded the project's start. The experience made evident that one institution's way of doing things cannot dominate the other's. A positive working relationship ensued once the partners came to understand this and developed ways of working together that accommodated the differing procedures.

Likewise, partners in collaborative projects must clearly understand their responsibilities and what is expected of them. When one partner expected more from the other than it received, the result almost always was disappointment. One reason the collaboration at the University of Colorado at Boulder had difficulty getting off the ground – and eventually collapsed – was that each partner thought the other was taking the lead. ➪

One project found that it was useful to develop collaboration standards that would ensure that the mission and policies of partner organizations were faithfully carried out. This work, spearheaded by Columbia College and the Richland School District in South Carolina, led to the development of an award-winning, model school district policy, procedures for facilitating interagency collaboration and a memorandum of agreement that guided the mutual sharing of confidential information.

Leadership is a prime area for conflict. All participants must fully understand and accept the concept of shared governance before embarking on a school and college collaboration. Shared governance means that no decision is strictly the prerogative of one institution. Several project leaders who had previously dominated planning and project implementation found that they were expected to share their power and authority with other partners in ways that gave everyone an equitable role in the decision-making process.

Choosing key school and college leaders for collaborative projects early on gives them the chance to get to know each other and shape the project together. Project leaders, in particular, must be able to fit the collaborative work into their other activities. Managing a collaboration takes time, energy and sometimes more than a little diplomacy. Faculty who teach a full academic load or who are involved in several other research efforts may be too busy to assume leadership and management functions in demanding collaborations. The same is true of teachers and administrators who are already involved in several change efforts in their school.

Partners must understand each other's cultures and styles.

Collaborations bring together school, college, community and business partners who come from many different backgrounds. These partners think, act and are governed in diverse ways. Collaborating with others may be a significant departure in ways of doing business compared to each partner's practices, experiences and expectations when operating separately. One simple example illustrates the gulf between school and college operating cultures: access to a telephone. College and university faculty have telephones in their offices and can make calls just about any time they like. Not only do most elementary and secondary faculty still not have telephones in their classrooms, there are few times during the day when they are free to place calls. Most of their telephone calls have to be made before or after school, when they must compete with other teachers to use the telephone in the school office or at some other centralized location. What's more, teachers in some schools do not even have access to their own building after hours!

As collaborations start up, differing perspectives and requirements are bound to collide. Accepting the existing practices of partner institutions and building on them is essential to effective collaboration. Project leaders at Indiana University Northwest, intent upon increasing community participation in education, pondered several organizational structures that would achieve that goal. They finally decided the most effective way to take advantage of the expertise and resources of community partners was to expand the project's board of directors.

In collaborations where partners come from different cultures, positive working relationships require a willingness to understand the dynamics and validity of the other culture. Good relationships also require open communication, dialogue and compromise. Project leaders at Gallaudet University, for example, found that their goal to train paraprofessionals to become certified teachers of deaf and hard-of-hearing students required them to take into account the culture of older learners who had some prior experience in the field. This meant infusing principles of adult learning into their courses. ✓

Perspective

Culture Signals What a School or College Values

Schlechty and Whitford, 1988.
O'Reilly, 1989

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Working Together

Because individuals and organizations respond slowly to change, partners should not demand that the adoption of new practices be rapid and thorough. While there are many pressures within participating institutions to move quickly, change has a higher probability of taking root if it is gradual.

School-college collaborations must be sensitive to the issue of teacher time.

Building capacity for change among the partners of a collaborative venture takes an extraordinary amount of time. College faculty traditionally enjoy more flexible schedules and time to reflect on education reform. Teachers' schedules, on the other hand, are a constant challenge in collaborations. Nonetheless, both schools and colleges need to provide faculties with release time to participate in collaborative projects.

Schools and colleges dealt with the problem of too little time in several ways. Some introduced an extended day and other scheduling alternatives to make time for teachers, teacher educators and content specialists to plan together, hold seminars and study groups and visit other schools. Others offered stipends, graduate credit or other incentives to urge faculty participation after school, on weekends and during the summer. Several projects paid for substitutes so that teachers could attend professional development seminars and project planning events.

Teachers, in particular, typically bear the burden of change and are the ones who actually implement new educational approaches in classrooms. How can they fit them in? Are schools willing to redirect teachers' time? Several participating schools had as a cardinal rule that the collaboration not make more work for classroom teachers. One project director suggested that teacher educators could provide a valuable service by introducing schools to effective learning procedures that do not require the regular teacher to be present at all times. This would relieve some of the time crunch and give teachers additional opportunities to participate in collaborative work and other professional development activities.

One of teachers' biggest time challenges is that their day-to-day responsibilities leave them with little time to reflect on their goals and activities. Recognizing this, several collaborations provided teachers with professional development activities in which they stepped back from daily pressures to reflect on their instructional practices.

At spring and summer workshops at Mount Holyoke College, middle school teachers kept journals in which they reflected on their teaching practices, concentrating on how they set up their classroom environments to be safe and caring, designed their lessons and prepared their students for hands-on activity. Through a process of self-assessment, action, feedback and subsequent reflection, they became more thoughtful about what they did, in much the same way that they asked their students to be. ⇨

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Perspective

Where to Get the Time to Do It All?

Teachers spend about 70 percent of the school day with students. Their time without student contact comes before and after school during planning periods and interspersed into duty free time, lunches and recesses, according to one survey. While short time segments allow teachers to use the copy machine or make a phone call, the more substantive planning involved in collaboration takes longer. It requires longer periods of time for substantive planning and preparation that most teachers say they do not have.

It may appear that the ideal time for teachers to participate in professional development activities is during the summer when students are not in school and teachers have fewer demands on their time. Teachers, however, are more likely to apply new instructional strategies if they receive feedback and support while trying the new strategies in their classrooms. This suggests that teachers need regular opportunities for reflection and problem solving while students are in school.

Similarly, school teams working with the University of Pennsylvania used their transition grant to document and disseminate school self-study as an approach to reform. Five teams of teachers, administrators, parents and students worked with university staff during week-long summer institutes and Saturday retreats to learn ethnographic research methods such as one-on-one interviews, focus group interviews and participant observation. After analyzing their data, they planned their reforms and collected further data about what was happening in their schools.

The time and energy that individuals invest in collaborations need not be overwhelming, but they do need to be sustained. There needs to be time for follow-up sessions where both school and college faculties can share their ideas and classroom experiences in using new practices.

Regular communication, team building and teacher networking keep up momentum.

Communication is the essence of collaboration. Not surprisingly, the lack of communication can stop a potential collaboration dead in its tracks. Regular communication, between college and school partners and across different project sites, is a fundamental tenet of successful collaboration.

Keeping the lines of communication open maintains support for a project, moves team planning forward and solves a plethora of other problems. Two key traits are commonly associated with effective communications. One of these is the ability to articulate one's own needs and ideas. Good communications require individuals to make their thinking explicit. College of Education faculty at Columbus State University needed to articulate their needs clearly so that the College of Science could produce students with the academic knowledge needed to be effective early childhood and middle grades teachers. "The development of benchmarks, the implementation of the modeling class and the revision of mathematics methods courses all began in the spirit of honest and open dialogue," said the project director.

The other trait in effective communications is the ability to listen openly and respectfully to the needs and ideas of others. Not surprisingly, school faculty were most likely to welcome college partners who demonstrated their ability to listen and identify with teachers' challenges in classroom instruction.

In addition to hearing the perspectives of their college partners, school faculty found themselves communicating with each other more often. Collaborative settings often provide the first opportunity for faculty to express their opinion about schoolwide issues. And, as faculty in Philadelphia schools collaborating with the University of Pennsylvania found out, the more interaction there is and as more hidden issues bubble to the surface, the greater the potential for conflict. Keeping conflicts on a professional level rather than a personal one helped faculty work through their differences and even taught them that conflicts often drive change.

Another lesson from the University of Pennsylvania experience is that sometimes an outside facilitator can accomplish what school faculty alone cannot. As faculty members were able to pull their ideas together with the aid of an outside facilitator who was not enmeshed in the internal politics of the school, they created a comfort zone in which dialogue developed.

In addition to communicating about their shared project among themselves, partners learned that they continually had to promote their project within their institutions. Finding ways to seed conversations about their goals, activities and successes with others became a central aspect of project directors' work. Those who did it successfully were able to connect their activities to the work of others in their respective institutions, boosting project visibility and lessening the likelihood that their projects would be obstructed, marginalized or even scuttled.

Participants also learned that a strong team spirit is important. A conscious effort is necessary to provide school and college faculties with team-building activities and to focus on structures and activities that promote professional collaboration. Without such a spirit, a project will not last. ⇒

Some innovative [illegible] experimenting with creative [illegible] structures to give teachers [illegible] orative planning time. For [illegible] Some schools "bank" [illegible] making [illegible] they can [illegible] fifth and sixth [illegible] planning period. Other [illegible] two periods of planning [illegible] tion time back to back [illegible] are all physical education [illegible] or foreign language [illegible] another option for [illegible] ize instruction that [illegible] lessons. Another [illegible] other personnel to work [illegible] for the [illegible] to give [illegible] to collaborate. A situation [illegible] is for students to spend one [illegible] work in [illegible] service, where the [illegible] ents, community members [illegible] structional staff.

Adelman, 1998

Networking keeps the momentum going by allowing participants to share experiences and merge their ideas. Networking, like communicating, is important, both between college and school participants, as well as among members of a single team and across teams. "Finding support and stimulating exchange across school and district lines are part of what keeps a partnership alive," noted a project director from the Commonwealth Partnership.

But collaborations are unpredictable and complex. Maintaining a teacher support network is difficult when project teachers are scattered across too many buildings. Having project teachers dispersed across different sites also interrupts the continuity of the education program for students because, for example, sixth-graders in the program may go to seventh-grade teachers who have not had the benefit of project training. Project leaders in Akron resolved this problem by reducing the clusters of schools in the project to two, but involving more teachers in those clusters.

Other projects turned to alternate ways of communicating and scheduling meetings to keep everyone in the loop. The most notable, as one might expect, was the use of technology. Both Heritage College and Columbia College alleviated the need for faculty to travel great distances for monthly professional development meetings and other project-sponsored activities by using computer technology. Northern State University matched teachers who were new to the project with e-mail mentors, who themselves were veteran participants.

School-college collaborations need stable leadership to take root and mature.

The reality is all too painful. When key leaders in a collaboration leave, their commitments often fail to stay in place. It doesn't matter whether the departing leader is a project director, school superintendent or teacher. New leadership may be less enthusiastic about a project than the old, have other priorities or want to put his or her own stamp on things. Even in the best of situations, turnover can drain a collaboration's energy and resources.

It wasn't unusual for Excellence in Education projects to slow down or run into difficulty when personnel retired, left for other jobs or went on sabbatical. Collaborations that appointed adjunct personnel to replace leaders who left found this to be especially so, since these individuals' inexperience within the institution demanded that they spend time mastering the project and learning their way around a college's bureaucracy.

Collaborations that planned for inevitable departures fared better. The Haverford College collaboration with Philadelphia teachers attempted to reduce the impact of key people leaving by putting several teachers from a school into a leadership position so the initiative's impact wouldn't be lost if one of them left. Florida A&M University required schools new to the collaboration to send both the principal and two teachers to training. Then, should the principal leave, the two teachers could lead the collaborative effort within the school. An alternative arrangement when a principal leaves is having outside coaches, such as university faculty or a district representative, visit the school weekly to see that the school stays on track in following its agreed-upon plan.

Instilling a new leader with a sense of project ownership can be an arduous task, especially if this person is loaded with other responsibilities. It is much easier when new leadership is excited about a collaboration. When project directors at Cumberland College changed, the new directors held two social activities to become acquainted with their partners. They also contacted partners individually to learn about their expectations and concerns. ⇒

Perspecti

Collaboration Evolves in Fits and Starts

McGrath, 1998

Perspective

Why Don't Teachers Change?

The teacher's purpose

The teacher as a person

No matter how well a collaboration plans for change, external events can shake it to its roots. This happened in Philadelphia, where the University of Pennsylvania project began under one superintendent, took shape during a long interim period and concluded its direct work with schools during the first year of a new superintendency. During this transition, one reform mission was replaced by another and the project, which had started with sponsorship from the highest level and cooperation from the teachers' union, got lost in the shuffle.

Similarly, when the superintendent of Biloxi, Miss., schools resigned, the program continued, but with an administrator whose commitment to mathematics reform wasn't as high on his administrative agenda. It succeeded, in part, because of dedicated teachers who stepped in to become team leaders in order to improve mathematics instruction for their students.

While organizational changes can disrupt a project's stability, they can also present new opportunities. The merger of the University of North Dakota's education programs with its human service programs to form a new College of Education and Human Development was not anticipated at the start of the project. University partners had to quickly find ways to mobilize the commitment to the project within the new structure and with new personnel. Fortunately, the project was able to fall back on a clear set of agreed-upon goals, which brought K-12 schools and community agencies into a collaboration with the reorganized college to offer integrated education, health and social services. Also, fortuitously, the merger presented an opportunity to strengthen the collaboration because the same dean became responsible for both programs.

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Collaborations must anticipate the needs of teachers.

The movement toward higher standards for students also requires higher standards for teachers. Tomorrow's teachers must be thoughtful leaders, proficient in the content they teach and able to go beyond teaching facts to engaging students in reasoning and problem solving. As the backgrounds of American students become more diverse, teachers must also be adept at instructing students with varied cultural backgrounds and learning styles. Collaborations offered several lessons about teacher practice, but none more important than getting teachers to buy into the changes expected of them.

Verbal buy-in was not always carried out in practice. Project directors at Mount Holyoke College and Hampshire College found that some teachers would consistently agree that something was a good idea, yet when project staff observed them in their classrooms, the teachers had not really changed their instructional strategies. These observations confirmed project leaders' commitment to refining, varying and intensifying their approaches to professional development.

Sadly, not every teacher has the skills or the disposition to change the way they practice their craft. If student teachers are assigned to teachers who are more interested in maintaining the status quo than they are in change, the new teachers may adopt the same values as their supervising teachers. It is better to assign interns to hard-working teachers who are dedicated to implementing innovative programs and can serve as role models for high-quality teaching.

Some of the reasons for teachers' resistance to new approaches can be attributed to their beliefs. For example, teachers in one community were genuinely surprised when their urban, low-achieving students responded positively to an intellectually challenging algebra program. Prior to participating in the project, they were certain that their students couldn't learn algebra! »

The context of teaching

The culture of teaching

Fullan & Hargreaves, 1996

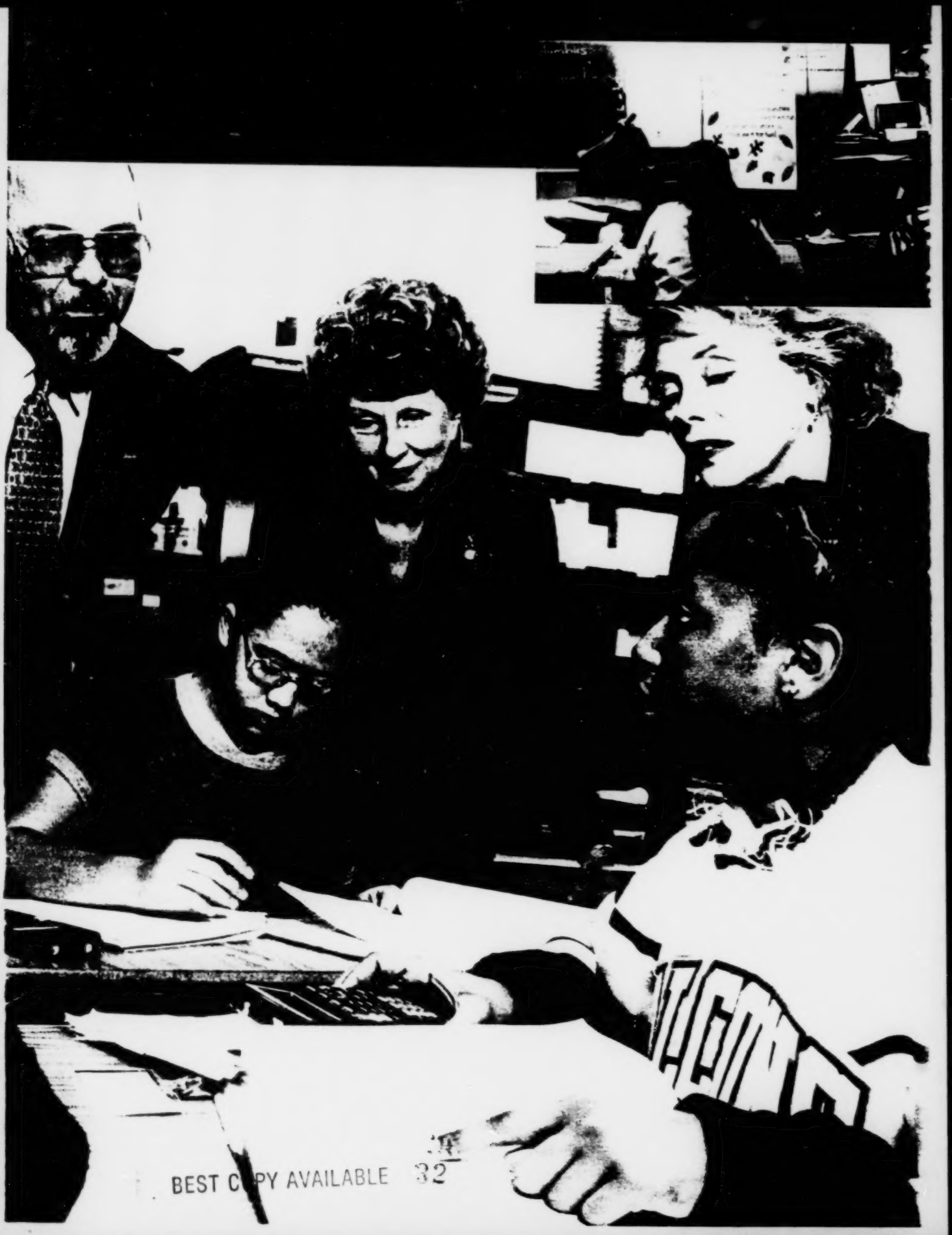
There may be other reasons underlying teachers' reluctance to change. Change involves unlearning as well as learning. Serious change is a series of individual transformations that may take much longer than anticipated. While project staff at Mount Holyoke and Hampshire Colleges initially devised a plan whereby teachers would be trained over the course of one summer and return as more effective teachers to their classrooms in the fall, that's not how it turned out. What worked far better was for teachers to begin assimilating new ideas and approaches over the summer, implement new approaches the following school year and then return to the program again the next summer to refine their ideas and practice.

Anticipating what approach will work best in persuading teachers to embrace new instructional practices is complicated at best. Project staff at the University of Akron and at Florida State University found that a direct approach in which teachers were given model units to implement was more effective than providing teachers with a framework within which they planned their own instruction. At the University of Southern Mississippi, however, just the opposite ensued. There, teachers embraced change because they had actively participated in creating and evaluating materials and had vested interests in seeing their reforms continue when outside funding was no longer available.

As these examples suggest, understanding what is useful in each collaboration is critical. One way to make collaborative activities even more usable for teachers is to structure them around the content of lessons or units that teachers are currently teaching. One-size-fits-all courses and seminars and one-shot workshops are rarely effective because they do not meet teachers' needs at that particular point in time. Collaborative activities that embed a substantial amount of subject knowledge and tie it to teachers' immediate classroom needs in a timely manner serve two purposes. They strengthen teachers' understanding of subject matter and give them instructional activities they can use immediately.

Juniata College's touring science vans illustrate a practical, just-in-time means for meeting teachers' needs. The college's partner schools are poor, rurally isolated and lacking in up-to-date science technology. Some schools only have resources such as beakers, Bunsen burners and extension cords. Science vans, each carrying equipment for biology and chemistry classes, visit schools daily. Van drivers, who are certified science teachers assisted by science education students from Juniata College, team-teach with classroom teachers. The college supplements these science activities with two-week summer institutes on campus, where school, science and education faculty focus on science content and develop new laboratory curricula.

One important lesson was that a program's academic pace needs to accommodate individuals who have other demands on their time, such as holding down an outside job. Partners in the Gallaudet University project used a number of approaches such as summer institutes and weekend and evening courses, flexible course sequences and distance education courses to provide paraprofessionals with training leading to a master's degree in deaf education. Even so, the pace of the program was slower than they anticipated because students had to balance the academic demands of the program with work and home responsibilities. At Haverford College, the issue was that college students who take summer jobs can't attend two-week training programs in the middle of the summer. Other arrangements had be made to recruit students and accommodate their summer work schedules. ✓



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Keeping the Collaboration Going

Recognizing and rewarding participation builds strong collaborations.

A major principle in sustaining school and college collaborations is to involve as many people in the process as possible. This goes for colleges as well as schools. The more college faculty are involved in planning and designing a collaborative effort with schools, the greater the collaboration's potential impact on the college's teacher education program.

Part of spurring school and college faculty to collaborate is creating incentives for them to do so. Unfortunately, the reward structures in most American universities mitigate against collaboration as a fully legitimate role for faculties in colleges of education. This applies not only to collaborating with public schools, but also to collaborating with other colleges within the same university. Schools such as the University of North Dakota, which has made K-12 collaboration part of its strategic plan and widely accepts it as an appropriate area for faculty service, are still rare. Project STEP at California State University at Dominguez Hills had virtually no faculty involvement in planning its science and mathematics enrichment activities, even though STEP activities took place right on the college campus. Enthusiastic and creative public school faculty developed STEP and implemented it with the assistance of high school students.

College faculty members who commit time and energy to collaborations need some of the same recognition that other faculty receive for publishing research. Providing faculty with a formal and recognizable forum through which to present the fruits of collaborative work to colleagues legitimizes their participation and dedication to school-college partnership programs. It rewards them for their work and encourages their colleagues to participate in similar programs. →

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Perspective

School-College Collaboration Yields Professional Rewards

Sustaining an innovation is just as difficult as getting it going.

An innovation must be continually marketed within the school system. Most project staff in Excellence in Education initiatives recognized the importance of highlighting their activities and successes at every opportunity. Without this attention, other initiatives might be given priority, as was the case in Philadelphia and Biloxi. As Excellence in Education collaborations moved from the development phase to dissemination and evaluation, they learned that the staying power of their innovations was often in direct proportion to how well they achieved two principles. The first concerned the number of links connecting their project to a district's or school's improvement plan. Playing an important role in a school's, district's, or state's improvement priorities increased a project's sustainability and ability to produce substantial change.

Change projects such as the Columbus State University collaboration to implement Algebra for All in Georgia middle and high schools and the Johns Hopkins University collaboration with Miami-Dade County Schools to implement Roots and Wings in middle schools are cases in point. Both curricula were implemented in large numbers of schools because they responded to established priorities. The implementation of Algebra for All was mandated by the state. The researchers who developed Roots and Wings adopted the program to comply with Miami-Dade County and Florida curriculum standards.

The second principle of staying power is the rule of critical mass. The more people who are involved in a collaboration, the greater the likelihood it will last. This, in turn, increases the probability of the collaboration having an impact on the programmatic issues that it set out to address in the first place. Several projects learned that using the turnkey approach was helpful in creating this critical mass. In the turnkey approach to disseminating an innovation, teachers who participated in a project early on assist other teachers in their schools to develop classroom activities. The Commonwealth Project, Charlotte-Mecklenberg schools and the College of St. Scholastica all used this approach to introduce problem-centered, hands-on, integrated math and science lessons in their respective districts. ⇨

The turnkey approach is not new. Curriculum and staff development projects have been using it to spread their innovations to growing numbers of educators for several decades. The approach, however, comes with caveats. Staffs in Excellence in Education projects learned that not all teachers had the leadership skills to pass on the excitement, sense of ownership and content and process strategies that they had learned. Before teachers could assist other teachers back at their home schools, they needed additional leadership skills training.

Other projects discovered that working with a large number of schools limited their success. Participants in the Mount Holyoke College/Hampshire College project, for example, found that working with a few teachers spread over many schools diluted relationships with principals. Consequently, principals were not informed about the project and did not incorporate it into school improvement plans. Similarly, concentrating on fewer schools to change instructional practices would have been wiser than trying to reform the K-12 system in the University of Southern Mississippi project. These two projects found that working with more people in a smaller number of schools helps build stronger relationships and can thus make a greater impact on student attitudes and achievements.

Project directors at Cumberland College tripled the number of student and mentor pairings during the third year of the project. This growth made monitoring the project's impact difficult because project staff were unable to maintain contact with so many pairs. After rethinking their strategy, they reduced the number of pairs to 40 in the 1997-98 school year and to 20 pairs in ensuing years. The college also developed a data management system to help keep track of students until high school graduation, permitting the project to ascertain if students continue their education beyond graduation.

Austin and Baldwin, 1992.
Brookhart and Loadman, 1992.
Gips and Stoel, 1998.

Perspective

Five Stages of Continuous Evaluation

Stage 1:

Stage 2:

Evaluation points the way to success.

To keep a project going, partners must demonstrate the added value it brings to their institutions and to the people they serve. Standardized test scores, while important, do not always measure the actual results of particular programs. Nor will they tell whether a partner's self-interests were met.

Evaluating Excellence in Education projects raised major questions for partners: What should be assessed? What constitutes success? How should the perspectives of various stakeholders, including teachers, college staff and funders, be reflected? How should outcomes be attributed to particular influences? What assessment tools are most appropriate?

Evaluation should be a positive experience, with each partner helping to design and implement it. The most useful evaluations are incorporated throughout the collaboration and point the way to continuous improvement.

In the early stages of the Excellence for Education program, it was not unusual for projects to collect only process information – facts about the collaborations they had started and the programmatic activities they had designed and conducted. Collecting information on a project's impact was put off until later. Over time, however, projects learned that their stakeholders wanted to know how project services were affecting their intended beneficiaries. To address these important needs, projects revised their evaluation plans to incorporate measures of project effects on students, institutions and others.

Across the Excellence in Education projects, partners used many strategies to evaluate their effects on students. At Florida State, project staff examined course grades, students' self-reports of achievement, teachers' perceptions and other indicators of student learning in order to assess the effects of a new, interdisciplinary middle grades initiative on student attitudes, learning habits and technology proficiency.

Even such multiple measures, however, may not tell the whole story about project effects. Interpretation and analysis of student data need to consider the fact that many unrelated factors influence students' learning. "We know [the project] makes a difference in the lives of the mentees, but in reality, many other variables also influence student success," said directors in Cumberland College.

And when partnerships extend to the community, as they did at Columbia College and the University of North Dakota, evaluation is even more complex. Both of these projects brought health, social and other community services together in a school. While the arrangements appeared to promote a sense of community and support family well-being, their direct link to student achievement was difficult to establish.

For these reasons and others, many projects found it necessary to revise their evaluation plans once their projects were under way. Some, like Juniata College, learned that evaluation was a full-time task that was more effectively accomplished by someone outside the project. In that case, a recently retired professor from Penn State University's education school was retained to conduct an independent, third-party assessment of the collaboration.

Stage 3:

Stage 4:

Stage 5:

Knight Foundation, 1996

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Perspective

Sustaining Collaboration

Miles and Ekholm, 1991

Extending collaborations to other projects strengthens relationships even more.

A new openness to collaborating with others may be one of the most important outcomes to emerge from the Excellence in Education program. Numerous participants, as a result of their Excellence in Education collaborations, became involved in other endeavors of their partner institutions.

A project director at the University of Akron was included as an adviser in a grant the district received from the National Science Foundation. Haverford College found that its collaboration with Philadelphia middle schools made its teacher education students a source for tutoring help in Philadelphia middle school classrooms. For its part, Haverford is recruiting middle school students from its partner schools in Philadelphia into another of its outreach programs and using the contacts that it made by working with the school district to arrange opportunities for its education students to observe in public school classrooms.

In Grand Forks, through the collaboration, the University of North Dakota and Lake Agassiz Elementary School became acquainted with a variety of children's agencies to which they extended temporary housing after the 1997 flood. At the national level, the National Council for the Accreditation of Teacher Education selected this collaboration as one of 20 sites to pilot-test draft standards for professional development schools. ✓

Collaboration Check Off

Getting to Know Each Other

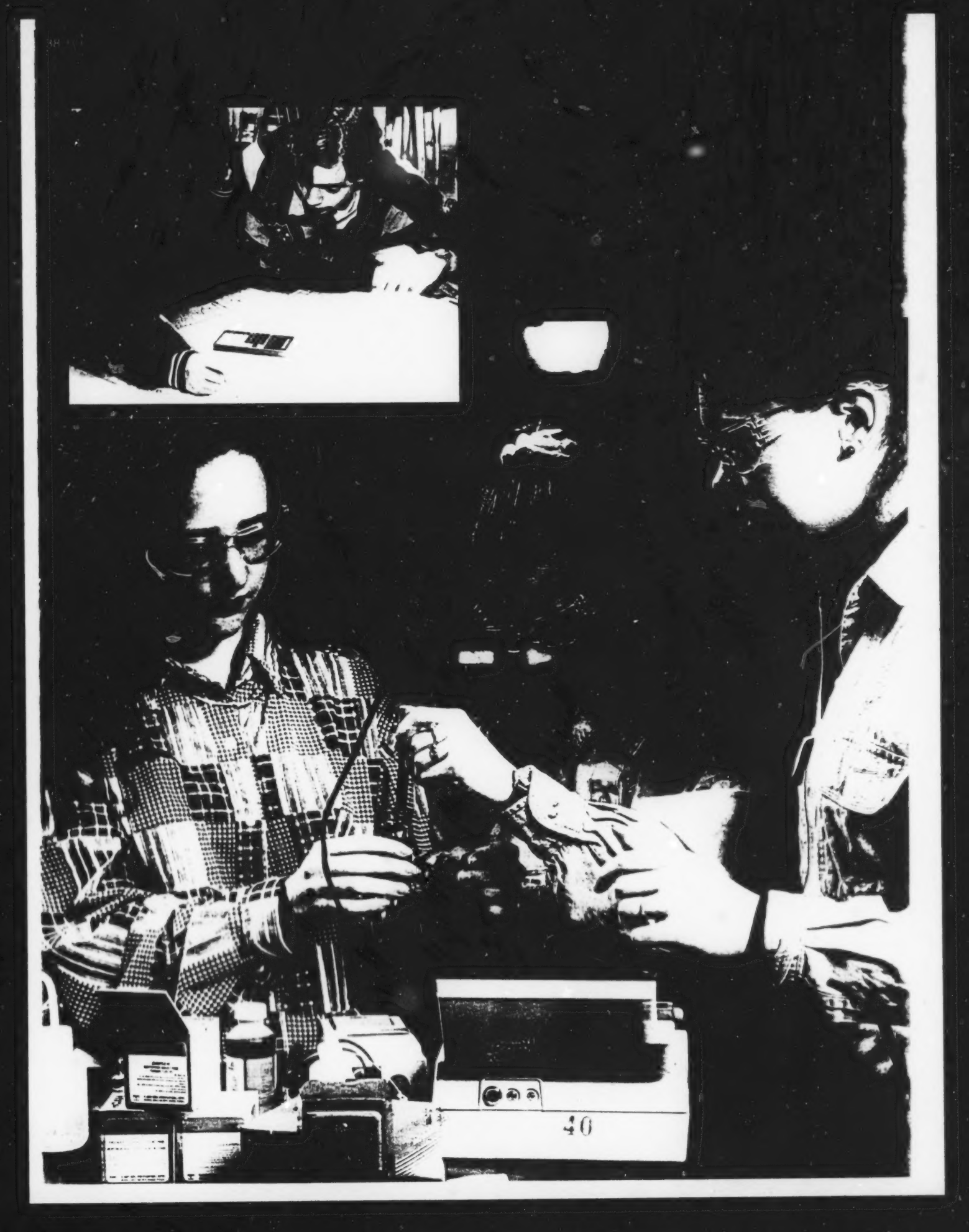
- ☐ Line up stakeholder groups.
- ☐ Get commitment from top administrators.
- ☐ Develop a shared vision.
- ☐ Define the goals of the collaboration.
- ☐ Implement a public awareness campaign.
- ☐ Agree on the policies and decision making procedures that will guide the collaboration.
- ☐ Clarify roles and responsibilities.
- ☐ Learn about each other's culture.

Working Together

- ☐ Manage time so that the collaboration fits into teachers' schedules.
- ☐ Set up a system of regular communication that includes opportunities for participants to network and share experiences.
- ☐ Decide if an external facilitator is necessary.
- ☐ Market the collaboration to key leaders in the school and in the university.
- ☐ Use team building activities to promote professional collaboration.
- ☐ Create a leadership structure that remains stable if key personnel change.
- ☐ Involve teachers in designing their own professional development.

Keeping the Collaboration Going

- ☐ Build incentives for college faculty to collaborate with schools.
- ☐ Link the collaborative project to the school district's improvement plan.
- ☐ Create a critical mass of people participating in the collaborative project.
- ☐ Evaluate the project for continuous improvement.
- ☐ Extend the collaboration by finding other ways to work together.



A Foundation's Perspective

on Learning to Collaborate and Collaborating to Learn

By A. Richardson Love Jr., Director of Education Programs, John S. and James L. Knight Foundation

Foundation support usually means dollars. When the John S. and James L. Knight Foundation launched the Excellence in Education initiative in 1992, its support meant exactly that: grants. We learned quickly, however, that effective promotion of collaboration necessitates becoming a willing collaborator. As a result, we began to define support more broadly. Beyond giving dollars, a foundation can affirm, endorse and recognize; convene; offer feedback and perspective; help make connections; be flexible; and provide the precious commodity of time. The more ways we found to be supportive, the more we gained in information and insight into a grant recipient's experience. We were literally collaborating to learn.

Beginnings. The Excellence in Education initiative grew out of Knight Foundation's traditional commitment to the support of higher education and an emerging trustee interest in improving public school education. It built on a belief that colleges and universities have the capacity and the responsibility to help strengthen public schools and the opportunity to improve themselves in the process.

With the invaluable assistance of an advisory committee of distinguished educators, we asked for candid reporting that shared both highs and lows, carefully reviewed reports and gave feedback that provoked reflection. We did not expect that everything would go well or exactly as planned. We did expect, however, that the collaborators would document and seek to understand surprises, problems and disappointments, and develop thoughtful responses. The partners were permitted and encouraged to propose revisions to their original plans as experience reshaped the landscape of pitfalls and opportunities. ⇨

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Perspective

Maintaining Forward Momentum

Trubowitz and Longo, 1997

Two key observations came from an early evaluation of the program in 1995 by Washington, D.C.-based Policy Studies Associates. First, additional time and support beyond the initial three-year grants would be necessary if the projects were to approach demonstrable improvement in student learning. Second, the higher education partners, by and large, were not taking advantage of the opportunities to reform themselves created by the collaborations. These findings led us to reconsider an almost exclusive "project" emphasis and to begin exploring ways our support could help grantees build institutional capacity. We recognized stronger, more balanced and enduring relationships between colleges and schools as an important outcome, irrespective of the specifics of the grant project. As emphasized in our publication *Learning to Collaborate: Lessons from School-College Partnerships in the Excellence in Education Program* (1996), "Long-term relationships, often rocky in the early stages, are sustained in part because the partners encounter problems and together invent new, mutually beneficial approaches to addressing them." Collaborations, we learned as funder and collaborator, are evolving relationships.

Knight Foundation also moved beyond an emphasis on the activities, such as curriculum reform and teacher professional development, to define success as improvement in student achievement. It is an outcome that we knew would be, for complex reasons, difficult to document or demonstrate convincingly. We also qualified that expectation by acknowledging that such success would take time to grow. As a result, the Foundation extended the initiative into a second, transition phase.

As a convenor and connector, Knight organized annual gatherings of grantees in the National Conference on School/College Collaboration and, eventually, the national conferences of The Education Trust. The meetings helped college and school representatives share experiences; look to each other for challenge, reinforcement and example; interact with experts in relevant fields; and become engaged in a growing national network of school/college collaborators. They also helped the Foundation invest more personally and directly as a collaborator.

Transitions. Beginning in 1995, Knight Foundation suspended new grants for new projects in the Excellence initiative and organized to provide additional support for existing, previously funded projects. These transition grants were intended to help the collaborating partners continue their work to reach a point of demonstrable impact on student achievement, document and disseminate what they have learned and accomplished, institutionalize the best of their efforts for the longer term, heighten the impact of reform activity on the higher education partner and strengthen the existing collaboration (including expansion to bring in other partners).

In contrast to the beginning stage of the initiative when almost exclusive attention was focused on curriculum and teachers in schools, many of the collaborations came full circle, back to higher education in the transition phase and especially to an emphasis on reform of teacher education. It became apparent that many of the partners had first needed to work together in the field with new standards and veteran teachers in order to understand and then more confidently address how to improve the preparation of teachers for the future. From the Foundation's perspective, the collaborations as a whole were markedly more sophisticated and effective at the end of five years than they had been at the end of the original three-year funding.

Connections. The Excellence in Education initiative began to wind down in 1997 as the first group of collaborations funded began completing their transition grants. The clustering of the grants as an initiative was becoming more artificial and difficult. Yet, in a few cases it was clear that there could be additional opportunity for limited support to leverage even more significant impact without encouraging funding dependency. Thus, the Foundation organized a less formal and more responsive third phase of the initiative to help selected projects complete their work, move to scale or connect to other, more comprehensive reform agendas.

Modest additional support for the Center for Urban Ethnography at the University of Pennsylvania has helped it publish and disseminate project results. A grant to Hampshire College is helping invest the legacy of its Knight-funded collaboration with Mount Holyoke College and the Springfield (Mass.) Schools in a new Center for Innovative Education, which is orchestrating a variety of ongoing school-college initiatives. ➡

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Additional support is also enabling two Excellence projects to become part of more ambitious and comprehensive local efforts to improve education. A grant to the Summit Education Initiative in Ohio is helping expand countywide the standards-based mathematics reforms fostered by Project AAMP at the University of Akron with the Akron Public Schools. The University of North Dakota, along with its growing circle of partners, is using substantial additional funding to leverage a major expansion of the School as Center of the Community, full-service model, which was successfully adapted and pilot-tested with an Excellence transition grant. These two grants helped link the Excellence program to a new Knight initiative supporting larger-scale education reform at the local level, which also includes support for Annenberg Challenges in Detroit, Philadelphia and South Florida.

By gradually expanding our annual grantee gatherings to include organizations funded outside the Excellence initiative, we have brought additional perspective, experience and potential collaborators into the mix. Among the organizations included are the Collaborative for Teaching and Learning in Kentucky, Communities In Schools, Education Development Center, The Galef Institute, IMPACT II: The Teachers Network, National Board for Professional Teaching Standards and The National Faculty. This strategy has moved us from simply helping to forge a limited and fragile network of grantees to encouraging the networking of networks.

Knight Foundation also took to heart the evaluation finding that the colleges and university partners were not responding to opportunities for necessary change and began to explore ways to help colleges and universities better prepare to meet society's future needs. The result has been support for the innovative Knight Higher Education Collaborative based at the University of Pennsylvania's Institute for Research on Higher Education. The collaborative now numbers more than 160 colleges and universities working in a variety of ways together to respond more thoughtfully, purposefully and expeditiously to the demands of the future.

Reflection. Our perspective on the Excellence in Education initiative should incorporate some of the honest reflection on shortcomings we expect from our grantees. The number of changes in leadership in the collaborations was significant and at times disconcerting. Knowing this now and that such changes are always a possibility, we should be prepared with strategies to help new leaders get up to speed and to help collaborations stay on course while orientation and socialization is happening.

Our experience should also help us in the future to develop schedules for proposal processes, reporting and feedback that are less arbitrary for grantees and more attuned to academic calendars, cyclical demands in education and the progress of the real work the grant is supporting. Often in the Excellence initiative, predetermined dates for trustee and advisory committee meetings and the late fall schedule for the annual National Conference on School/College Collaboration dictated grant decisions, reporting deadlines and feedback that were inopportune and even distracting for those we funded.

Seeing the value and power of the sharing of information and experience among the grantees in this initiative, Knight Foundation should also be prepared to enhance that sharing by linking initiative participants electronically. Although discussed from the outset and often requested by the participants interested in continuing interactions fostered by the annual grantee gatherings, the technological linkages simply never happened. Initially there was a lack of capacity at the Foundation, then a lack of flexibility to support capacity found elsewhere and finally a lack of priority for use of newly acquired capacity. Technology could have enhanced the opportunities for learning substantially.

Collaboration never makes things easier, even for funders. There is clear testimony from this program, however, that the extra effort collaboration requires pays significant and sometimes surprising dividends. Beyond the specific knowledge of how education reform moves forward, the returns for Knight Foundation have been some major lessons that are clear, easily stated and understood, but not yet fully mastered:

- Success is student achievement, and success takes time to grow.
- Promoting collaboration requires being a willing collaborator.
- Collaborations are evolving relationships. There are no blueprints.

Rich, informative and rewarding, our experience with Excellence in Education has helped Knight Foundation become a collaborator, though one in need of practice and with a great deal still to learn. ✓

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Excellence in Education Projects

University of Akron

Akron (Ohio) Public Schools

In Akron, Ohio, as in other places, many students entered high school lacking sufficient mathematics background to learn algebra. A review indicated that some elementary and middle grades teachers were weak in mathematics themselves and unable to help their students make the transition to algebra effectively.

Educators at the University of Akron and Akron Public Schools began tackling this problem in 1993, the year they received an Excellence in Education grant. Since then, they have adapted and implemented integrated mathematics curricula in sixth through eleventh grades. With a transition grant awarded in 1997, they are revamping fourth- and fifth-grade mathematics curricula as well.

This collaboration, known as Akron-Achieving Mathematical Proficiency (AAMP), reorganized professional development activities around clusters of schools. A cluster is composed of several middle schools that feed into one high school. Project partners, including university content specialists as well as teacher educators and district curriculum coordinators, have trained more than 125 Akron faculty to use the new middle grades curricula, which are based on instructional standards developed by the National Council of Teachers in Mathematics (NCTM).

Teachers received more than 80 hours of professional development in mathematics content, effective instructional techniques and the use of technology in summer workshops and follow-up activities. Many of the professional development topics were selected based on student performance on the Ohio Proficiency Test. A community component introduced the new expectations and ways of teaching mathematics to parents and other stakeholders.

In addition to their efforts in schools, project staff worked with faculty in the university's mathematics department to develop new, NCTM-based mathematics courses for preservice teachers and held technology seminars. The seminars, which drew faculty from across disciplines, played a crucial role in initiating cross-campus conversation about changing the way college faculty members teach.

Project directors predict that, by the end of the project, nearly 200 school faculty will have received training. After that, the University of Akron will offer faculty periodic retraining workshops.

Faculty in the schools will continue to work with student teachers and beginning teachers so that Akron and its surrounding systems will have a steady source of teachers educated in an increasingly demanding and technology-oriented mathematics curriculum. ⇒

California State University at Dominguez Hills

School Districts of the South Bay Area of Los Angeles, Calif.

The Science, Technology Enrichment Program (STEP) drew sixth-, seventh-, and eighth-grade students from the South Bay area of Los Angeles to the campus of California State University at Dominguez Hills to develop skills that would prepare them for future careers in science.

A joint initiative of the university and participating school districts, the project received an Excellence in Education grant in 1992 to support the sixth-grade component of this effort. In the program, approximately 440 students attended three-week summer institutes and Saturday activities in mathematics, science and technology during the school year. Many of the students were from minority groups, predominantly African-American and Hispanic. Most had never been on a college campus before, but by the end of their experience, according to project staff, students were excited about giving college a try.

On campus, the inquiry method of learning mathematics and science dominated student activities. Students conducted experiments and other activities that called on them to sharpen their creative thinking and problem-solving skills. They also came into contact with counselors and students from a magnet high school on campus. Counselors provided students with career information, laying out for them the types of courses they would need for college admission and for careers in math, science and technology. The high school students served as assistants in the project and mentors to some of the students. Many of them became role models, answering students' questions about what it's like to attend the magnet school, encouraging students' interests in mathematics, science and technology, and helping them develop confidence in their ability to succeed in these fields. Over the course of the project, 10 STEP students were accepted into the magnet school.

Teachers who participated in the project enjoyed benefits as well. The project enabled them to develop confidence as mathematics and science teachers and to experiment with alternative teaching and assessment styles.

The academic-year component continued students' explorations in special Saturday activity groups for sixth-graders and museum activities for seventh- and eighth-graders.

University of Colorado at Boulder

Six School Districts in Colorado

This Excellence in Education project was intended to join 10 K-12 science teachers from six Colorado school districts with eminent science scholars from the University of Colorado at Boulder for a year of curriculum design and development. Teachers were to be released from their normal teaching assignments to investigate the scope and relevance of science courses in which future teachers enroll. Their focus was to be on science curriculum issues identified by the local, state and national scientific community. At the same time, university science scholars would have had the opportunity to work closely with public school educators and with teacher education students. Difficulties in communication among partners, competing priorities and leadership changes frustrated the project's early implementation. The project was discontinued before the three-year grant was completed.

Columbia College of South Carolina

Richland County (S.C.) School District One

For many families in Richland County, S.C., access to health and social services is as close as their children's school. Thanks to the collaboration between the school district and Columbia College, four schools – three elementary schools and a middle school – have a nurse, a social worker and a mental health counselor ready to serve students and their families.

Columbia College, a small liberal arts college for women, and Richland County School District One started this effort under an Excellence in Education grant in 1993. A transition grant awarded in 1996 has helped the partners institutionalize what the collaboration has developed and evaluate the process.

The school district serves a mix of rural and inner-city students. Most are members of minority groups and are poor. Project staff believed that offering health and social services to students and their families was a key part of improving students' academic performance. One-stop shopping for education, health and social services had the advantage of fostering close relationships among teachers, administrators and agency personnel. Under this arrangement, family crises can be spotted early and assistance can be close by and swift.

In addition to sorely needed health and social services for students and their families, the school district needed a strong professional development program for its teachers. Again, schools became the focus. Two schools became professional development schools, with a special emphasis on teachers becoming leaders and advocates for school change. In addition to operating as regular schools, these schools became sites where school personnel could collaborate with college students and faculty to strengthen their learning programs, novice teachers could get advice from veterans, experienced teachers would have opportunities to grow professionally and researchers could add to educators' knowledge about making schools more productive.

In 1997, faculty in the college's English Department, students at the college and school faculty began developing activities to strengthen reading and writing instruction at both the college and the schools. The effort is assisted by a writer-in-residence during the fall and spring semesters.

A third component gave students at all four schools the chance to participate in educational and cultural programs during the summer.

Columbus State University

Columbus (Ga.) Regional Mathematics Collaborative

Quality mathematics thinking begins in the primary grades. That's the message conveyed to future mathematics teachers at Columbus State University in Georgia as they prepare for careers in early childhood and middle grades education. Another message is that attitude matters. Teachers must exhibit a curiosity and enthusiasm about mathematics themselves if they expect to promote their students' mathematical learning.

To make sure these messages get across to prospective teachers, the university paired with the Columbus Regional Mathematics Collaborative – a partnership made up of business, industry and education leaders – and high school and middle school teachers from 29 schools across the state to implement Algebra for All, a state-mandated program to improve and expand the learning of algebra. Teachers attended monthly staff development sessions and received financial support to attend state and national mathematics conferences, access to other resources and the services of a resource teacher who visited their classrooms. An Algebra for All project coordinator suggested instruction and assessment techniques to teachers.

A transition grant in 1997 refocused the project on the university. As part of a broader effort to reform the university's core mathematics education curriculum, project staff began to revamp how and what future algebra teachers were taught. By pulling together Algebra for All faculty and faculty from the College of Science, the College of Education and the University College, along with members of the Columbus Regional Mathematics Collaborative, participants formed a team ready to address both content and instructional issues in teaching algebra. This team identified essential algebra concepts that every college graduate ought to understand and developed an instrument for measuring student competency.

The team also developed a core mathematics course for teacher education students, called Mathematical Modeling. This course mixes content, method and classroom practice, and infuses technology into instruction. Algebra for All faculty field-tested some of the new course in their advanced high school mathematics classes, thus bringing new content and instructional techniques into their own classrooms. They also teach roughly half of the modeling classes each quarter at the university. Other faculty serve as lab assistants, conducting sessions on the use of graphing calculators and tutoring students.

Commonwealth Partnership

12 Colleges and Universities

Five School Districts Around Harrisburg, Lancaster and York, Pa.

Time, resources and critical mass help innovations take hold. The Commonwealth Partnership's original Excellence in Education grant gave school and college faculties the time and resources to develop interdisciplinary curricula aimed at boosting student interest and achievement in mathematics and science. Transition funding provided the means to take the curricula to more school faculty, thus creating the critical mass to help sustain change.

The Commonwealth Partnership is a consortium of 12 colleges and universities dedicated to improving education through school/college collaboration. Its Excellence in Education program, called Integrated Math and Science Teaching, or IMAST, joined professors with principals and math and science faculty from five suburban and rural school districts in South Central Pennsylvania.

In two summer residential institutes – one three weeks long and the other one week – teachers and college specialists in geology, biology, mathematics and education immersed themselves in content and pedagogy. Teachers returned to their classrooms in the fall with at least two lessons they could use right away and ready to identify other areas where integrating math and science would strengthen student learning. Five days of release time during the school year enabled school and college faculties to meet again to review and revise their lessons. At other times, reunions and team meetings kept the two in touch. Outreach programs for colleagues in their own and neighboring districts acquainted others with their work.

For schools, the collaboration produced curricula that reflect the open-ended, hands-on nature of research in math and science as well as the essential connections across these disciplines. In universities, it increased collaboration among academic departments and changed teaching strategies in undergraduate science education courses.

During the summer of 1997, using resources from their transition grant, participants in the original project mentored a new group of 17 teachers from their districts in a week-long training program. This time, the outcome was a set of integrated lessons in math, science, social studies and home economics. After testing and revising their lessons, teachers turned them over to the partnership office for wider distribution. They shifted their own attention to assessing changes in student thinking before and after the introduction of the IMAST activities.

Cumberland College

Whitley (Ky.) County School System

For young people on their way to middle school and later on their way to high school, having someone to turn to for support and encouragement is a pivotal factor in smoothing out the transition. This Excellence in Education collaboration between Cumberland College and the Whitley County School System in Kentucky paired high-risk middle schoolers with college students who served as their mentors. The goal was to improve at-risk students' perception of their self-worth and the value of education. Mentors, meanwhile, gained service and leadership experience.

Whitley County is deep in Appalachia. Eighty-nine percent of its students qualify for free or reduced-price lunches. Living conditions are generally poor. Mentors reported that one youngster lived in a trailer with a tarpaulin for a roof; another lived in a trailer where the front door didn't close. These conditions made it clear to project staff that paying attention to how and what the mentors taught wouldn't be enough to achieve the project's goal. They would also have to pay special attention to the characteristics of the middle schoolers they were mentoring.

Mentors spent a minimum of two hours per week for 14 weeks with students at school extracurricular activities, with the children's families and at community events. Project staff were careful to point out that the success of the project couldn't truly be measured until students were ready to make the transition from high school to work, postsecondary training or college. Nonetheless, a survey showed that the middle schoolers were overwhelmingly positive about the program. They said they performed better in school because of the guidance and encouragement their mentors gave them, that they would like to go to college after they graduate from high school and that they felt important when they were with their mentors. Most parents were pleased, too. They said that their children enjoyed the mentoring program and that the mentors were dependable and planned interesting activities for the children.

Because conflicts with peers, parents and other adults are endemic to the adolescent years, one of the products of this project was a course in conflict resolution for mentors and other preservice teachers.

The original Excellence in Education grant was awarded in 1993 to develop and pilot test the mentoring program. Six mentor and student teams participated in the pilot program. A 1997 transition grant institutionalized the collaboration at the college and in its partner schools. In 1998, the collaboration sponsored 26 mentor and student pairs.

Florida A&M University

National Center for Accelerated Schools at Stanford University

Leon and Gadsden County (Fla.) Schools

The premise behind Accelerated Learning is that if students are having trouble learning, shunting them into slower remedial classes will just put them further behind. Instead, these students need to learn at a faster rate so that by the end of elementary school they will have caught up to their classmates.

Under their Excellence in Education grant, awarded in 1994, school and university faculty in this collaboration developed a regional center where area educators interested in adopting the Accelerated Schools approach to school change could obtain training, mentoring and technical assistance. Educators at the center trained special coaches in Accelerated Schools' concepts and in ways to train others in Accelerated Schools' instructional techniques.

These coaches, in turn, met with teachers and administrators in interested schools to plan implementation strategies. They spent at least one day a week at the school, visiting classes and giving feedback to teachers. They provided, arranged or coordinated in-service training. Some coaches modeled or gave demonstration lessons. As individual programs matured, coaches trained other coaches. ➠

It takes about six years for a school to become truly "accelerated." Transition support is making it possible to evaluate the effectiveness of the Accelerated Schools reform model in raising student achievement in four of the schools participating in the Excellence in Education project. These schools have already reported improved student self-esteem; increased achievement, especially in mathematics; greater student interest in learning; more parent participation and fewer disciplinary incidents.

Another component of the transition grant is testing Read, Write and Type, a computer-assisted reading program developed by California Neuropsychology Service with Knight Foundation support.

Meanwhile, partners have established a regional network of schools implementing the Accelerated Schools approach and designed curriculum modules that link Accelerated Schools principles to Florida's state educational standards and benchmarks.

Florida International University

Miami-Dade County (Fla.) Public Schools

Recruiting and preparing teacher education students for teaching careers in inner-city schools was the principal goal of FOCUS (For Our Children in Urban Settings), a collaboration between Florida International University and Miami-Dade County Public Schools.

Implemented with an Excellence in Education grant awarded in 1993, FOCUS extends beyond the usual teacher education curriculum. Grounded in the unique needs of urban schools and communities, it uses a two-part approach to immerse teacher-interns in learning the knowledge, skills and attitudes with which to be effective teachers in inner-city schools. The program's motto: "No new teacher shall be a beginning teacher."

The five partner schools all had high concentrations of minority, low-income students and are located in a school district scrambling to find qualified teachers to keep up with climbing enrollments. Each week from the start of their five-semester course of study, FOCUS interns served two full days at partner schools getting extensive exposure to the needs and conditions in urban classrooms. They spent one day a week in community service agencies. This approach produced teachers with hands-on experience in inner-city schools and in the agencies that serve students in those schools and their families.

Over the course of the project, interns' professional development experiences evolved from participating in workshops conducted by master teachers to joining a community-based advisory board and becoming an active member of a teacher-driven content and assessment team.

Project staff members point to a roster of ways this nontraditional experience has helped participants. Interns and teachers established mentoring relationships in which interns got advice from veteran teachers and, in turn, gave teachers a continuous infusion of fresh ideas for their teaching. The students in those classes scored higher on standardized tests than students in classes that did not have an intern. Teacher education classes at the university became more student-centered and began to use more reflective teaching methods. FOCUS interns demonstrated a deeper understanding in their university classes as a result of their experiences in the field. The project also built a critical bridge between schools and social service agencies.

Florida State University

Leon and Taylor County (Fla.) Public Schools

The old, teacher-dominated, textbook approach to instruction is giving way to instruction that integrates math, science, social studies and language arts, and extensively uses computers in schools that participated in Project TEAMS.

TEAMS stands for Technology Enhancing Achievement in Middle School. Its development began in 1992 under an Excellence in Education grant and continued through 1998 with a transition grant to evaluate the program in three schools.

The goal of the project was to develop, implement, evaluate and refine a new approach for integrating technology, interdisciplinary instruction and active learning into the middle school curriculum. University faculty, teacher education students and faculty from Fairview Middle School in south Tallahassee's urban neighborhoods developed a sixth-grade instructional program built on four nine-week units. Each unit uses one of four themes, appropriate to the everyday concerns of middle schoolers tying mathematics, science, social studies and language arts together. The four themes are transitions, caring, identities and conflict resolution.

Since the initial work, project staff have designed 12 more model units, with instruction in each unit lasting approximately two weeks. Some of the units are appropriate for seventh-graders as well. Program materials include activities guides, a teacher's manual, an administrator's guide, a training facilitator's guide, activity cards outlining what students are to do, student work logs and software applications. Tests measure students' attainment of the objectives at the beginning of each unit and afterwards.

Evaluation showed that this integrated approach helped students recognize connections across subject areas, improve their attitude toward school, become more self-directed learners, work in groups and become proficient with computers. In fact, shortly after the implementation of Project TEAMS, Taylor County Middle School was removed from the list of critically low-scoring schools based on Florida's state assessment. While the project doesn't claim all the credit for the improved scores, the school board funded the expansion of TEAMS into seventh grade for the following year and eventually added an eighth-grade component.

Gallaudet University

Kendall Demonstration Elementary School at Gallaudet

Model Secondary School for the Deaf

Maryland School for the Deaf

Pennsylvania School for the Deaf

Fairfax (Va.) Mainstreaming Program for Deaf and Hard-of-Hearing Students

All children need strong role models. But having role models to look up to and emulate becomes even more important when children are deaf or hard of hearing. For these children, role models are living proof that a disability doesn't need to stand in the way of success.

The goal of Project Achieve is to increase the number of certified teachers of deaf and hard-of-hearing children who are themselves deaf. In addition, because a large proportion of children in classes for deaf students come from ethnic minority backgrounds, another project goal is to attract more teachers from minority groups. Developed with an Excellence in Education grant awarded in 1994 to Gallaudet University and its five partners schools, the pilot project initially enrolled 12 teacher education students. Project staff are now using a transition grant awarded in 1998 to develop a distance-learning component so they can open the program to more prospective teachers.

The work is based on school and university staff identifying experienced paraprofessionals in partner schools and providing alternative programs leading to a master's degree in deaf education. To accommodate adult learners who must deal with family and job pressures while returning to school, flexible course sequences and independent study experiences feature prominently in the project. Staff also made university courses more accessible by teaching them at school sites – an arrangement that has the added advantage of providing professional development to certified teachers in those schools as well.

The addition of a distance-learning component with individualized programming will open up the program even more by reducing travel to campus for students who live and work far from school. On-campus courses are scheduled mainly in the summer when schools are out.

A recent survey of Project Achieve students indicated that one of the project's chief strengths was the opportunity to take courses while working with children each day in their jobs. This, participants said, enabled them to use the new ideas they learned right away. Participants also liked the availability and convenience of the courses. ⇨

Haverford College

School District of Philadelphia, Pa.

Fear strikes the heart of many elementary teachers when they are suddenly called upon to teach math and science to students in middle grades. Their elementary certificate didn't prepare them for the wide variation in intellectual and emotional learning readiness. What is the right pedagogy? Is their own background in mathematics or science sufficiently strong? The fact that many of these teachers teach in overcrowded and ill-equipped classrooms compounds the problem.

But teachers in Philadelphia and future teachers enrolled in Haverford and Bryn Mawr Colleges' teacher education programs who are participating in Inquiry in Science and Math, an Excellence in Education project at Haverford College, have a jump start on just this kind of situation. In two-week summer workshops and three school-year meetings, school and college faculties and teacher education students met for lecture, discussion, laboratory experiments, manipulatives-based and computer-assisted learning activities. They conducted experiments using water, mechanics and food preservatives; engaged in hands-on activities in the seasons, geometry, and digestion; kept lab notebooks and wrote short reports.

To ensure that teachers could use what they learned in their classrooms, their respective schools each received approximately $3,000 worth of equipment that each school selected from a list of equipment necessary to reproduce the summer projects.

College students established mentor relationships with teachers, and visited and helped teach in inner-city classrooms. In the third year of the project, they spent four weeks prior to the summer workshop compiling a booklet of classroom-tested laboratory exercises to distribute to other project participants. Project staff joined forces with two other area programs that have similar goals to disseminate the lesson booklets. They also placed the booklets on the Internet, with links to other educational web sites, as part of their transition grant.

Examination of portfolios, interviews and written evaluations from participants point to changes in mathematics instruction. Students of the teachers who took part in the program used computers more frequently, performed more experiments, used more hands-on learning tools, recorded data in lab books and wrote formal lab reports to communicate their findings.

Heritage College

Toppenish, Wapato and Mount Adams (Wash.) School Districts

Yakima Tribal School

Heritage College in Washington is a small school with a big mission. Located on the Yakima Indian Reservation, this private, independent liberal arts college tries to combat the poor self-esteem, cultural conflict and other emotional stresses that have afflicted young Native Americans.

Awarded an Excellence in Education grant in 1993, the college collaborated with three public school districts and a tribal school to ensure that Native American youth have positive role models by encouraging education paraprofessionals to become fully certified teachers. Another goal was to assist students who were preparing to teach or work in social services to understand the special problems that face Native American students.

Partner schools chose 23 paraprofessionals to enter the college's teacher preparation program. The students, called Knight Scholars, brought a rich background of personal, cultural and professional experience to the programs. This background was supplemented by courses in multiple intelligences, learning communities and change and school reform. Eleven students had completed the program by the spring of 1998.

To strengthen their own knowledge, college faculty reviewed research and learned how to teach a diverse student body more effectively. Professional development in the influence of cul-

ture and tradition on learning was designed to aid faculty in training future teachers in a way that is consistent with the multicultural mission of the college.

The Knight Scholars teacher education program aims to become self-sustaining by consolidating its efforts with the Indian Education Summer Institute. In 1997, support from a transition grant enabled the Knight Scholars component to contribute to the 1997 institute. Institute workshops focused on the latest research on Indian education issues, integrating active learning with Native students' learning styles, field trips, cultural events and interactions with members of the Indian community. Students spent time with experts and elders, worked with teachers and shared with others the cultural curricula that they had developed in their education courses over the past year.

Indiana University Northwest

Gary (Ind.) Community School Corporation

Gary ACCORD

Students need champions. Not the usual kind of champions associated with distant sports figures, but local champions who will press for their current and future well being. Schools, businesses and community organizations have assumed that role for students in Gary, Ind., through a partnership spurred by an Excellence in Education grant to Indiana University Northwest.

The partnership has set its sights on putting students to work after high school or sending them on to a postsecondary education. Its overall goal, however, is to increase community participation in education.

Coordinated by Gary ACCORD, a community-based organization, the project features "certainty of opportunity contracts" that assure employment or access to postsecondary education for students who meet predetermined goals for academic achievement. Students who keep up with their contractual obligations engage in career exploration activities, mentor and tutor other students, volunteer on community service projects and work in paid summer and part-time school-year jobs.

Under the 1994 grant, contracts were put into place with students in five elementary and middle schools. A transition grant, awarded in 1998, is extending the student contract program up to high schools.

To boost students' achievement, partner elementary schools use the Accelerated Schools model. Secondary schools use the Algebra Project. Teachers shadow workers in local businesses to get to know the business skills their students will need to find and succeed in careers after high school. These visits serve as a reference in integrating academic and job-related skills curricula. The university's Center for Management and Development provides a Total Quality Management (TQM) program for school administrators and teachers and the Quality Options program for students. TQM enables school leaders to assess what works and what does not, and to identify and build upon strengths. Students in the Quality Options program attend a five-week series of Saturday classes on career planning and self-assessment.

The participation of key business leaders has been a catalyst for others to participate in the project and provided additional resources. For example, eight major corporations and governmental bodies started a business tours component in which students visit partner businesses. Other partners developed a summer employment program for high school students called "Hire the Future."

Johns Hopkins University

Miami-Dade County (Fla.) Public Schools

How can students sustain the academic gains they made in elementary school while they move through the maze of physical, emotional, cognitive and social changes of early adolescence? That's the challenge facing many schools as elementary school students move up to the middle grades.

In Miami-Dade County Public Schools, educators think some of the answer may be in extending the curriculum up through the middle grades right along with the students. Their transition grant from the Excellence in Education program is helping them test the notion. →

An Excellence in Education grant awarded in 1994 supported the implementation of the Roots and Wings reform model in three Miami-Dade County elementary schools. Originally developed by researchers at Johns Hopkins University with funding from New American Schools, Roots and Wings uses research-based curricular and instructional approaches in prekindergarten, kindergarten and grades one through five in reading, writing, language arts, mathematics, science and social studies. The curriculum emphasizes thinking skills and engages students in cooperative learning with classmates where they apply what they learn to real-life or simulated problem-solving situations.Other critical parts of the program are one-to-one tutoring for first- through third-graders who are struggling to learn how to read and an active family component aimed at reducing health, social, attendance and behavior problems.

The three schools became part of a national field test of Roots and Wings. The results of the field test and positive reports from teachers and principal eventually prompted Miami-Dade County to implement Roots and Wings in an additional 45 elementary schools across the district.

However, the field test also showed that many students failed to sustain their gains once in middle school. With the Roots and Wings structure in place in elementary schools, transition support is helping school personnel and the Johns Hopkins researchers design and pilot-test Roots and Wings at the middle school level in Miami-Dade County. As with the original grant, transition funds also support the adaptation of the Roots and Wings curriculum to Miami-Dade and Florida standards, along with training and technical assistance to school and district personnel. The pilot test will evaluate both school and classroom implementation of Roots and Wings and student outcomes.

Juniata College

23 School Districts in Central Pennsylvania

Ask science teachers to name the biggest challenges to good science education and three issues spring to the forefront: access to laboratory resources that allow students to perform experiments, good professional development opportunities and sound science curricula.

Teachers from around the Pittsburgh area and a four-county region surrounding Juniata College – areas where school districts tend to be small, rural and poor – in collaboration with faculty from Juniata College, have found one way around this problem. They call it Science in Motion.

Science in Motion was developed with an Excellence in Education grant awarded in 1992. School and college faculty are making it part of Pennsylvania's science education infrastructure with a transition grant awarded in 1996.

Science in Motion is a three-part model for improved science education for high schools. The first part addresses the lack of laboratory resources in many small, rural schools by arranging for three vans to visit schools daily. Each van carries science equipment for biology and chemistry classes. Second, to provide professional development, introductory and advanced summer workshops bring teachers together with college faculty to learn about new technologies such as UV-VIS and infrared spectroscopy, gas chromatography and DNA fingerprinting. Third, teachers at the summer workshops develop experiments and curriculum that incorporate these technologies into classroom activities. To keep the momentum going during the school year, Science in Motion also sponsors seminars for teachers and science fairs for students.

This three-faceted approach to improving science education has been successful in the schools in which it was developed. An evaluation of the program showed significant gains in both biology and chemistry among all levels of students who participated, compared to students who were not in the program.

This good news was translated into additional funding from the Pennsylvania state legislature, which allocated $775,000 to continue the program after the Excellence in Education transition grant ran out. Legislators directed the Pennsylvania Department of Education to conduct a study on how to implement partnership programs statewide. Several colleges and universities, seeing the impact that Juniata College has had in improving science education in public schools, have expressed interest in establishing partnerships to expand the program to other school districts.

Mercer University

Houston County (Ga.) Schools

Teachers in Houston County middle schools in Georgia are convinced that constructivist-based teaching will motivate middle grades students to become excited about mathematics and science. And if students become excited about what they learn, the reasoning goes, their achievement will improve. Administrators agree. To that end, they used their Excellence in Education grant to shape a three-tiered, long-term improvement strategy with activities specifically aimed at teachers, administrators and students.

Constructivist-based teaching is based on the belief that children build new knowledge according to their previous experiences. The project involved faculty from Mercer University's College of Education team-teaching with school faculty in classrooms, videotaping instruction and reflecting upon it together. Over time, the videotapes allowed teachers to see how their instructional practices had changed to become more constructivist in nature.

Turning their knowledge into a format that could be used with a larger number of teachers, project staff devised new instructional units. They also offered nonparticipating teachers 10 hours of professional development during which they trained their colleagues in constructivist teaching practices.

A second tier of the project was a one-day seminar for school leaders. By involving principals, lead teachers and department chairs in this fashion, project directors aimed to maintain enthusiasm and increase knowledge and support for constructivist-based teaching as a way to shore up student achievement and attitudes.

A third-tier strategy dispatched middle graders to mathematics and science contests, fairs and field trips.

The experience buoyed the university's transition from a quarter to a semester system by providing the College of Education with a framework with which to redesign its teacher education curriculum. The college's new teacher education curriculum blends theory and practice, concentrating on teaching techniques that actively engage students in constructing new knowledge and assuming responsibility for their own learning. Taking their cue from the school component of the project, the strategy of having education students reflect on videotaped teaching experiences weaves through both undergraduate and graduate programs.

Mount Holyoke College

Hampshire College

Springfield (Mass.) Public Schools

In 1992, teachers in three Massachusetts school districts and their partners from nearby Mount Holyoke and Hampshire Colleges began to develop a new kind of learning environment that would fight adolescents' alienation and failure in school. Their goal was to increase learners' intellectual curiosity by developing new strategies for inquiry-based, interdisciplinary learning and teaching.

In spring and summer workshops, teams of faculty from the Springfield, Holyoke, and South Hadley school districts, and the colleges developed a cross-disciplinary approach to planning curricula in math, science, reading and writing. The new pedagogy emphasized active learning, feedback from mentor teachers and college faculty and ample time for team planning. In a summer program for 200 sixth-, seventh- and eighth-graders, teachers tried out the new approaches.

A select group of teachers received special training so they could provide feedback and mentoring for other teacher participants. College students served as "teachers in training," working closely with teacher teams, developing lessons and mentoring students, an experience that project directors hoped would fuel their interest in teaching in urban settings. ⇒

Some teachers initially resisted the new pedagogy because they believed that many inner-city children could not do the kind of inquiry-based learning that would be required of them. But the children's subsequent achievement caused the teachers to rethink their beliefs. After that, teachers pursued their new instructional approaches with enthusiasm and success.

A 1996 transition grant helped teachers in Springfield continue to develop their new instructional practices and disseminate them to other teachers.

Through the project, the colleges became acquainted with some excellent school faculty with whom to place their student teachers. School faculty were being asked to speak to college classes and co-teach with college faculty. Mount Holyoke College has developed a course for school faculty in racial identity and development, in part as a result of the project's work in Holyoke and Springfield.

University of North Carolina at Charlotte

Central Piedmont Community College

Charlotte-Mecklenburg (N.C.) Schools

Shortly after Mathematics Pathways was launched in 1992, 11 outstanding Algebra I teachers from across Charlotte-Mecklenburg Schools were appointed to be Pathways Pioneer Teachers. Their assignment was to become leaders in improving the quality of mathematics instruction in one of the nation's largest school districts.

This cadre of school faculty and their university partners participated in monthly seminars on topics such as using manipulative materials, developing alternative assessments and incorporating graphing calculators into instruction. Teachers returned to their home schools to share what they learned with their colleagues. The following year, the number of Pathways Pioneer teachers rose to 27, one teacher from nearly every middle school in the district. From there the program grew to its present status in which virtually every Algebra I teach has embarked on some part of Mathematics Pathways.

The ultimate goal of this Excellence in Education project, which operated from 1992 to 1996, was to produce a model of professional development that would extend the algebra curriculum seamlessly from the middle grades straight through the postsecondary level. School and college faculty designed summer and school-year workshops for teachers in schools whose students performed poorly on end-of-course tests. Project staff developed two three-hour workshops, with the first one focusing on the importance of all students learning algebra, and the other concentrating on specific mathematics competencies. They also put together a manual and accompanying teacher materials. Teachers immediately applied what they learned in summer school classrooms, getting speedy feedback on how their new instructional techniques were working with students.

Simultaneously, faculty at the University of North Carolina at Charlotte revised their own mathematics education curriculum to reflect the same algebraic competencies and assessment techniques that guided curriculum revisions in the public schools. The school faculty liaison from the project served as a consultant to the university's effort. The project director gave workshops to graduate students in the university's mathematics department, many of whom taught undergraduate classes and passed on the project's principles to their own students.

Activities at Central Piedmont Community College concentrated on a detailed analysis of students' progression from developmental to prerequisite courses. The purpose of this analysis was to lay the groundwork for a data pathway that would allow the three institutions to share information and eventually to document the project and its effects.

University of North Dakota

Grand Forks (N.D.)
Public School System

In 1992, the University of North Dakota and the Grand Forks Public School System received an Excellence in Education grant to deepen the use of interdisciplinary curriculum at an elementary-level professional development school and a partner middle school. Today, these schools are not only demonstrating the use of interdisciplinary curricula, they have also developed an alternative assessment that measures higher-order thinking and learning within an interdisciplinary curriculum. Parent, student and teacher goal-setting processes piloted at Lake Agassiz Elementary School, the professional development school for elementary school faculty, have spread to other Grand Forks elementary schools.

The curricula developed at Lake Agassiz were the basis for revising the university's teacher education program. In addition, pre-K-16 partnerships are now part of the university's strategic plan and are widely accepted as an appropriate area for faculty service.

Results like these didn't come easily. A steering committee of school and university faculty, chaired by the principal, guided the project. In each of the project's three years, summer workshops for teachers were reinforced throughout the year by release time for planning, teacher visits to each other's classrooms, study groups, seminars and conferences. School faculty attended project faculty meetings at the university, helping to keep mutual goals in view.

And while their hard work paid off, it didn't stop there. Project staff have used their transition grant to enter into collaborations with human service agencies to develop ways to meet students' needs for shelter, food, and water and family security. Not knowing it at the time the collaborations were formed, this mental health education aspect of the project was to assume critical importance in the aftermath of floodwaters that ravaged Grand Forks in the spring of 1997. Teachers generated a long list of curriculum connections to students' experiences during the flood and its aftermath. Then, using a town-meeting format, they discussed with the community how to help students recover from the devastation and implemented their curriculum units in the classroom.

The Schools as the Center of the Community arrangement has placed a full-time social worker and several social work interns onto the school's roster and is supplementing a part-time counselor with a counseling intern. Staff are now planning a resource center where parents can get referrals to health and human service agencies.

Northern State University

Aberdeen (S.D.)
Public Schools

Writing is a way of learning, but many students don't like to write. Their teachers aren't comfortable teaching this vital skill and are even less comfortable assessing it. The first step in this Excellence in Education project was to change student and faculty attitudes. The real outcome of the collaboration, however, was a sequenced plan for instruction and assessment in writing across the curriculum.

The basis for professional development was intellectual exchange. In the first year of the project, school and university faculties discussed research and theories of writing instruction, shared successful classroom practices and ideas, observed student learning behaviors and planned collaborative research projects.

The emphasis switched in the second year to ethnographic research and classroom inquiry techniques for identifying successful instructional practices. Again school and university faculties met in workshops, retreats and other training sessions, and took on writing projects of their own. The third year they addressed assessment. Each year's activities culminated with the publication of the project's journal. Titled the *Writing for Learning Journal*, its articles and reports showcased participants' research results. ➪

Analysis of teacher portfolio evaluations indicates the project successfully addressed its first two goals: participants' students, when compared with students in other classrooms, wrote with greater frequency and varied their writing according to their audience. In addition, surveys of changes in teacher and student attitudes and evidence of increased use of writing for learning indicate that the program's success reached beyond the bounds of the core groups to education in both institutions. At the university, a task force designed intensive, new writing courses. The teacher education department instituted a portfolio program for its students. A writing-for-learning course with portfolio collections and assessment became part of the new graduate program design.

The evaluation data established a baseline with which to gauge the quality and sophistication of student writing. A transition grant awarded in 1998 allowed project staff to evaluate the further impact of the Writing to Learn project on student learning. Project staff are institutionalizing the writing for learning approach in schools and the university by developing a speakers bureau, forming study groups, publishing a newsletter, creating mentor programs and conducting a summer writing institute.

University of Pennsylvania

School District of Philadelphia, Pa.

While there's frequent talk about teachers becoming leaders of school change, few teacher education programs have begun to prepare their students for this new role. One that has is the University of Pennsylvania, which used its Excellence in Education grant awarded in 1992 to work with Philadelphia teachers and its own teacher education students on the use of data in school-based management and shared decision making.

While Philadelphia's schools have routinely taken data such as student grades, attendance records and standardized test scores into account in their school improvement planning process, they have rarely considered the kinds of information that surveys, interviews and observations provide. The Knight-supported project, Taking Stock/Making Change, has responded to this need.

School teams of teachers, administrators, parents and students from five elementary and middle schools worked with university staff during week-long summer institutes and Saturday retreats to learn ethnographic research methods such as one-on-one interviews, focus group interviews, participant observation and the like. They then put their new research skills to work during the school year, collecting and analyzing information obtained using these techniques for data collection. As a result, they have begun to identify and heed evidence that differs from information they had been accustomed to considering in order to understand what was happening in their schools.

It all adds up to teachers and other educational stakeholders coming to rely on self-study as an ongoing change process. The school teams assess and reflect upon their work and use their research to guide their educational renewal plans and activities. The teacher education students involved in the process obtain hands-on experience in doing teacher-led, teacher-conducted research as a way to influence the direction of school reform.

Stimulated by their successes, teachers and university faculty used a transition grant awarded in 1996 to document their self-study process and disseminate its principles to other schools. They have issued five booklets in which each school tells the story of its self-study and subsequent changes in the school's educational program and governance. They also developed a guide to self-study for parents and educators to use as they conduct research in their own schools.

College of St. Scholastica

Seven School Districts in Minnesota and Wisconsin

Science and mathematics education is taking on a new look at the College of St. Scholastica and its seven, mostly rural, partner school districts in northeastern Minnesota and northwestern Wisconsin. There is a marked increase in thematic, hands-on instruction. Classrooms teem with learning centers, projects and hands-on activities. Textbook-based activities are rare. There is less lecturing in graduate courses and more hands-on learning.

When the College of St. Scholastica received an Excellence in Education grant in 1993, it established two goals for itself. It would use its grant to increase elementary teachers' knowledge of mathematics and science, and it would help teachers in the project become mentors and role models for their colleagues. In the process of achieving these goals, it would cultivate a cadre of teachers ready to assume leadership in curriculum development and bring vitality and classroom-tested instructional strategies back into its own teacher preparation program.

Working with college faculty, a core group of school faculty first deepened their own knowledge about up-to-date science and mathematics content and effective instructional practices and then developed new, thematic mathematics and science curricula. All the while, teachers used assignments from graduate courses and action research to help them identify needs in their own classrooms, and shared their new insights and products in workshops for peers in their school districts. In the final year of the project, they also designed model science and mathematics performance assessments and designed in-service programs on the use of these tools.

Veteran teachers in the group advised less experienced teachers on leadership skills that would help them present the new ideas and resources to their colleagues back in their home schools and school districts.

At the close of the project, 17 participating teachers earned master's degrees in education with a special concentration in teaching science and mathematics at the elementary school level. With this achievement, the school districts acquired an experienced set of teacher leaders. A new dialogue had developed among college faculty in science, mathematics and education; faculty from local schools; and scientists from area industry and government. In addition, the college changed its undergraduate science and mathematics courses for future teachers to make them fit state standards and incorporate more activities that foster leadership skills.

University of St. Thomas

St. Paul (Minn.) Public Schools

To strengthen the connection between teachers and their school communities, this project intended to involve beginning teachers in a series of staff development and community activities to increase their skill and confidence in working with diverse, urban students. Lack of early and adequate communication with the local teachers' union, combined with competing priorities and leadership changes, frustrated best intentions and led to the project's conclusion before the end of the original grant period.

University of Southern Mississippi

Biloxi (Miss.) Public School System

Biloxi's mathematics curriculum no longer frustrates students. It challenges them. Among the reasons they like it is its many links to the problem-solving, reasoning and communications demands that they encounter in their daily lives. Instructional strategies include the use of learning tools, hands-on activities and small group projects where students think, ask critical questions and discuss mathematics problems. Some of their problem-solving activities take them out of their classrooms into the school or even out into the community.

The K-12 curriculum was developed under an Excellence in Education grant awarded to the University of Southern Mississippi in 1994. A transition grant awarded in 1998 is helping project staff make the newly developed curriculum guide standard fare in classrooms, with a special emphasis on grades K-6, where math anxiety and attitudes about mathematics develop.

A second component of the project is a series of awareness sessions aimed at increasing parents' understanding of the mathematics education their children receive. Project staff used several devices to draw parents into schools, including offering evening Family Math sessions and inviting them to join their children in math class on Fridays. ⇒

Team leaders from participating schools are also offering workshops for undergraduate teacher education students, based on the concepts in the new curriculum. In addition, course content in the teacher education program itself has changed to reflect active learning on the part of students and less lecturing by professors. Field experiences in participating schools are an important part of prospective teachers' training.

The expectation is that this three-part strategy will strengthen instruction in the classroom, increase parental support of their children's learning at home, and institutionalize this new way of learning and teaching mathematics, ultimately improving students' attitudes toward mathematics and their achievement.

While evaluation data are scarce, the approach seems to be on the right track. Teachers report improvements in students' problem-solving abilities and a more positive attitude about taking standardized tests.

Stetson University

Osceola County (Fla.) Public Schools

The Celebration School is a state-of-the-art school in Celebration, the new town created by the Walt Disney Corp. in central Florida. In 1994, an Excellence in Education grant provided resources for Stetson University and its partners to plan a year-round professional development academy using the Celebration School as a laboratory.

Specifically, the purpose was to create a place where educators could go to see and participate in innovative and research-based approaches to school improvement that they could take back to their own schools and classrooms. With faculty from Stetson, Auburn University, Johns Hopkins University and the University of Central Florida, the Teaching Academy would attract and instruct thousands of preservice and in-service educators annually.

When fully developed, the Teaching Academy will contain a center for educational design, a master teacher institute, an executive leadership institute, a distinguished educator series and other activities. Educators across the nation will be able to attend this forum for the dissemination of cutting-edge research and practice, and return to their classrooms with innovative ideas and instructional techniques.

In addition, participating universities have established a professional development school consortium, which will explore new models of teacher development and further develop the Celebration School. As each university learns from the other, the plan is for it to transform its own teacher education program. The National Education Association (NEA) is also a partner in the effort.

Stetson also worked with the Walt Disney Corp. and NEA to develop distance-learning programs for educators to use both before and after they attend the Teaching Academy to enhance the likelihood of the innovative approaches taking hold in their classrooms. ✓

Excellence in Education Projects that Received Transition Grants

University of Akron

Columbia College

Columbus State University

Commonwealth Partnership

Cumberland College

Florida A&M University

Florida State University

Gallaudet University

Haverford College

Heritage College

Indiana University Northwest

Johns Hopkins University

Juniata College

Mount Holyoke College
and Hampshire College

University of North Dakota

Northern State University

University of Pennsylvania

University of Southern Mississippi

Excellence in Education Projects that Concluded after the Initial Three-Year Grant

California State University
at Dominguez Hills

Florida International University

Mercer College

University of North Carolina
at Charlotte

College of St. Scholastica

Stetson University

Excellence in Education Projects that Concluded before the End of the Original Grant Period

University of Colorado at Boulder

University of St. Thomas

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John S. and James L. Knight Foudation
2 S. Biscayne Blvd.
Suite 3800
Miami, FL 33131-1803
(305) 908-2600
www.knightfdn.org

Hodding Carter III,
President and CEO

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Richard C. Gilman,
President Emeritus of
Occidental College

Holly Houston and Grant P. Wiggins,
Co-founders, Center for Learning Assessment and School Structuring (CLASS)

Policy Studies Associates, Inc.

1718 Connecticut Ave., N.W.,
Suite 400
Washington, D.C. 20009
(202) 939-9780
Elizabeth R. Reisner and Üllik Rouk

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Knight Foundation

2 S. Biscayne Blvd.
Suite 3800
Miami, FL 33131-1803
(305) 908-2600
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